DOCUMENT RESUME

ED 140 500 EA 009 682

TITLE	A Study of the Effects of an Altered Workweek.
INSTITUTION	Wood Educational Consultants, Edmonton (Alberta).
SPONS AGENCY	Alberta Dept. of Education, Edmonton.
PUB DATE	Feb 77
NOTE	601p.; Not available in hard copy due to small print size of many tables, charts, and graphs
EDRS PRICE	MF-$1.16 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Administrative Personnel; Behavioral Science Research; *Flexible Schedules; *Job Satisfaction; *Labor Force; Leisure Time; *Man Days; Organizational Change; Organizational Climate; Organizational Effectiveness; Perception; Sampling; Self Actualization; Statistical Surveys; Time Blocks; Work Environment; *Working Hours
IDENTIFIERS	Alberta

ABSTRACT

The purpose of this study was to examine the effects of organizational change arising from alterations in the structuring of the workweek. Data were collected from a stratified random sample of management and nonmanagement personnel employed within the various branches of the Alberta Department of Education. The sample consisted of 132 standard hours respondents, 37 compressed workweek respondents, and 227 flextime respondents. The study examined the respondents' (1) perceptions of job satisfaction and organizational performance, (2) family interaction and family relationships, (3) participation in various leisure activities, and (4) commuting patterns and travel arrangements. The nonmangement personnel involved in altered workweeks indicated significantly more satisfaction with aspects of the job than the nonmanangement standard hours group. However, the two groups involved in altered workweeks noted a greater decline in participation in leisure activities and had experienced a significantly greater increase in boredom than did the standard hours group. The two groups involved in restructured workweeks made greater utilization of the public transit system and car pools than the standard hours group. (Author/MLF)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED140500

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A STUDY OF THE EFFECTS OF AN ALTERED WORKWEEK

Commissioned by the Alberta
Department of Education

BEST COPY AVAILABLE

EA 009 682

WOOD EDUCATIONAL CONSULTANTS

FEBRUARY 1977

RELEASE FORM

This is to certify that the enclosed document fulfills the conditions outlined in the agreement between the Alberta Department of Education and Wood Educational Consultants pertaining to the study of 'The Effects of an Altered Workweek'.

Jack M. Wood, Director
Wood Educational Consultants

ACKNOWLEDGEMENTS

The author wishes to express his gratitude for the co-operation and willing assistance of a number of persons who made this study possible.

Appreciation is extended to Dr. W. Hathaway and Mr. D. Pinckston from the Alberta Department of Education who contributed a considerable amount of their time to assist in the collection of the data for this study. Also, the Directors of the various branches within the Alberta Department of Education were extremely helpful with the collection of this data.

Thanks are extended to Miss G. Couch and Mrs. J. McKinney for their excellent service in typing and formatting this document. An expression of thanks is also due to Mrs. C. Prokop for her advice and assistance with the computer processing of the data for this study.

Finally, the researcher wishes to thank Dr. G. Mowat, Dr. E. Seger, Dr. D. Richards, Dr. C. Bumbarger and Dr. R. Pannu for their constructive criticisms and assistance throughout the study.

ABSTRACT

The purpose of this study was to investigate the effects of organizational change arising from alterations in the structuring of the workweek. The basic problem was to determine if there were any significant differences in the operation of the organization among groups involved in different workweek structures.

The study was designed to focus upon differences pertaining to both inter and intra-group perceptions of organizational operations and the effects of various allocations of working hours.

Data was collected from a stratified random sample of management and non-management personnel employed within the various branches of the Alberta Department of Education. A questionnaire and an interview schedule was developed by the researcher to obtain this data and a pilot test was conducted to improve the validity and reliability of this item pool.

Descriptive and inferential statistics were employed to analyze the data, and statistical significance was reported when the obtained probability was not greater than .05.

In the first section of the data analysis intra-group differences in perceptions of organizational operations associated with various workweek structures were

examined.

Generally, it was found with the exception of one case, that the management personnel did not perceive any significant differences in the level of job satisfaction within these various workweek structures. However, the non-management personnel perceived significant differences for all variables relating to job satisfaction measured in this study, and in all cases the two innovative groups indicated higher job satisfaction than the Standard Hours group.

In addition, the analysis of variance procesures employed, disclosed that both management and non-management personnel reported a number of significant differences among variables relating to both the direction and importance of changes in organizational performance.

Furthermore, it was found that the impact associated with different methods of time allocation upon family interaction and personal relationships was more widely felt by non-mangement respondents. In most of these cases, at least one of the innovative groups noted a more significant, improvement than was indicated by the Standard Hours respondents.

Alternatively, it was disclosed that for 10 of the 14 items where important differences were found relating to decreased participation in leisure activities, the two groups involved in altered workweeks noted a greater decline than the Standard Hours group.

Finally it was found that the two groups involved in the restructured workweek made greater utilization of the public transit system than the Standard Hours group. Furthermore, the innovative group made greater use of car pools, and tended to draw more members of their car pools from outside of their immediate family than the Standard Hours group.

In the second section of the empirical analysis, inter-group perceptions of organizational operations were examined.

Firstly, it was found that there were many more significant differences between Standard Hours management and non-management perceptions of job satisfaction than were obtained within each of the innovative groups. Thus, in the future demands for a re-structured workweek may be expected to arise from dissatisfied non-management personnel.

In addition, it was disclosed that there was a fairly high degree of consensus among management and non-management perceptions concerning changes in the direction and importance of variables relating to organizational performance. However, for the Stnadard Hours group, the non-management personnel indicated that any changes that had occurred in organizational performance were less acceptable to them, whereas generally within the two innovative groups the non-management groups indicated a higher level of acceptability than their management counterparts.

Furthermore, it was found that the Standard Hours System may be placing excessive strain upon the family interaction and personal relationships of many management personnel. Whereas within the innovative groups many positive gains have been recorded in this area, particularly for non-management personnel.

Generally, it was found that the personal characteristics of all groups of respondents were not significantly related to their perceptions of job satisfaction and organizational performance.

Additional investigation disclosed that the implementation of a specific innovation in the management of time had been associated with some positive and negative changes in some indicators of operational costs. Furthermore, these innovations had also effected the pattern of working hours of respondents, including changes in times relating to arrival, lunchbreak, and departure from the worksite.

Also it was disclosed that management and non-management personnel considered that service to the public had improved since the adoption of these innovations, but clients of these respective branches recorded some deterioration in the nature of services.

Finally, it was found that almost 80 percent of Standard Hours respondents favoured the adoption of a re-arranged workweek, although they were almost equally divided in their preference for a Flextime or Compressed Hours model.

TABLE OF CONTENTS

Chapter Page

1. DEFINITION AND DISCUSSION OF PROBLEM

Introduction 1

General Statement of the Problem 5

Specific Statement of the Sub-Problems 6

Assumptions 10

Limitations 11

Delimitations 13

Definition of Terms 14

Organization of thesis 18

2. CONCEPTUAL FRAMEWORK AND A REVIEW OF THE RELATED LITERATURE

Organizational Change and Alterations in the Workweek 20

Understanding the Chage Process 22

Organizational Change as Content and Alterations in the Workweek 23

Flextime Models of Time Allocation ... 23

Compressed Workweek Model of Time Allocations 27

Organizational Change as a Process and

Alterations in the Workweek 30

Roger's Adoption Theory 31

The Awareness Stage 33

The Interest Stage 36

The Evaluation Stage 38

Chapter Page

The Trial Stage 60

The Adoption Stage 63

Chapter Summary 65

3. RESEARCH DESIGN AND DESCRIPTION OF THE SAMPLE

Importance of the Study 67

Organizational Structure of the Alberta Department of Education 68

Selection of the Sample 70

Instrumentation Selection and Development 77

Pilot Study and Validation of Instrumentation 80

Operational Cost Analysis 88

Statistical Treatment of the Data 89

Description of the Sample 92

Standard Hours Respondents 93

Compressed Hours Respondents 104

Flexible Hours Respondents 107

Chapter Summary 109

4. RESEARCH FINDINGS: INTRA-GROUP ANALYSIS OF PERCEPTIONS OF ORGANIZATIONAL OPERATIONS ASSOCIATED WITH DIFFERENT WORKWEEK STRUCTURES

Perceptions Concerning Job Satisfaction and Workweek Structures 111

Job Satisfaction Priorities for Standard Hours Group 111

Job Satisfaction Priorites for Compressed Hours Group 112

Job Satisfaction Priorities for Flexible Hours Group 113

Comparative Analysis of the Mean Scores for Job Satisfaction 113

Intra-Group Analysis of Differences Between Means for Job Satisfaction 116

Analysis of Variance: Job Satisfaction 119

Factor A - Schedule Monitoring 120

Summary 127

Factor B - Individual Antonomy 127

Summary 136

Other Variables 136

Summary 143

Perceptions Concerning Organizational Performance and Workweek Structures ... 145

Analysis of Variance: Organizational Performance 145

Factor A - Organizational Communication 145

Summary 161

Factor B - Work Scheduling 161

Summary 175

Factor C - Service to the Public and another Departments 177

Summary 184

Other Variables 185

Summary 191

Chapter Summary 195

5. RESEARCH FINDINGS: INTRA-GROUP ANALYSIS OF ALTERATIONS IN THE WORKWEEK AND ORGANIZATIONAL CHANGE

Alterations in the Workweek and Changes in Family Interaction and Personal Relationships 196

Summary 207

Alterations in the Workweek and Changes in Leisure Activities 208

Creative Activities 210

Service Oriented Activities 215

Participant Activities 215

Spectator Activities 218

Social Communication Activities 218

Other Activities 219

Summary 220

Alterations in the Workweek and Changes in Commuting and Parking Arrangements 220

Comparison of Modes of Commuting 222

Characteristics of Members of Commuting Groups 224

Relationship to Members of Commuting Groups 227

Comparative Cost Incurred by Car Commuters 227

Summary 229

Chapter Summary 230

6. RESEARCH FINDINGS: INTER-GROUP ANALYSIS OF ALTERATIONS IN THE WORKWEEK AND ORGANIZATIONAL CHANGE

Differences Between Management and Non-Management Perceptions of Job Satisfaction 231

Standard Hours Group 231

Compressed Hours Group 236

Flexible Hours Group 238

Chapter Page

Intra-Group Comparison of Discrepancy Ranking for Job Satisfaction 245

Differences Between Management and Non-Management Perceptions for Family Interaction and Personal Relationships 247

Standard Hours Group 247

Compressed Hours Group 249

Flexible Hours Group 249

Differences Between Management and Non-Management Perceptions of Organizational Performance 252

Standard Hours Group 252

Compressed Hours Group 261

Flexible Hours Group 269

Intra-Group Comparison of Discrepancy Rankings for Organizational Performance 277

Correlation Analyses Between Personal Variables and Job Satisfaction 280

Standard Hours Group 280

Compressed Hours Group 284

Flexible Hours Group 286

Correlation Analyses Between Personal Variables and Organizational Performance 288

Standard Hours Group 289

Compressed Hours Group 299

Flexible Hours Group 305

Summary 312

Chapter Summary 315

7. RESEARCH FINDINGS: INTER-GROUP COMPARISON OF ALTERATIONS IN THE WORKWEEK AND

ORGANIZATIONAL CHANGE

Changes in the Pattern of Hours of Work and the Flextime Concept 317

Selection of Hours of Work 318

Commencement of Working Hours 318

Commencement and Termination of Lunch hours 322

Termination of Working Hours 324

Summary 326

Changes in the Pattern of Hours of Work and the Compressed Workweek 327

Selection of Hours of Work 328

Commencement of Working Hours 329

Commencement and Termination of Lunch Hour 331

Termination of Working Hours 332

Summary 333

The Implementation of the Compressed Workweek Model and Effects on Consumption Spending 336

Level of Consumption Spending 336

Composition of Consumption Expenditure 337

Summary 338

Compressed Workweek and Child Care Facilities 338

Flexible Working Hours and Change in Operational Costs 340

Absenteeism Rates 341

Labor Turnover 343

Average Staff Size 345

Overtime 345

Chapter Page

Summary 345

Compressed Working Hours and Changes in Operational Costs 345

Absenteeism Rates 348

Labor Turnover 350

Average Staff Size 350

Overtime 350

Summary 350

Standard Hours Group Perceptions Concerning the Restructuring of the Workweek 354

Limitations of Innovations in the Management of Time as Perceived by Standard Hours Respondents 354

Perceived Advantages of a Flextime Model for Standard Hours Respondents 358

Perceived Advantages of a Compressed Hours Model for Standard Hours Respondents 362

Chapter Summary 365

8. SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

The Problem 367

Intra Group Analysis 367

Inter Group Analyses 368

The Procedure 369

The Findings - Intra Group Analysis 370

A. Job Satisfaction 370

B. Organizational Performance 373

C. Family Interaction and Personal Relationships 375

D. Leisure Activities 377

E. Commuting Patterns and Travel Arrangements 377

The Findings - Inter Group Analysis 378

A. Job Satisfaction 378

B. Organizational Performance 381

C. Family Interaction and Personal Relationship 388

D. Correlation Analysis - Job Satisfaction 390

E. Correlation Analysis - Organizational Performance 392

F. Changes in Operating Costs 394

G. Changes in the Pattern of Working Hours 395

H. Compressed Hours and Changes in Consumption Expenditure 396

I. Compressed Workweek and the Provision of Child Care Facilities 396

J. Standard Hours Perceptions and Innovations in the Management of Time 396

Conclusions and Implications 397

A. Intra Group Analyses 397

B. Inter Group Analyses 402

Recommendations for Further Research 418

Bibliography 420

LIST OF TABLES

Table Page

1. Historical Trends in Standard Hours of Work 35

2. Historical Trends in Standard, Actual and Paid For Hours of Work 36

3. Selection of Stratified Random Sample for Standard Hours Respondents 73

4. Selection of Stratified Random Sample for Flexible Hour Respondents 74

5. Selection of Stratified Random Sample for Compressed Hour Respondents 75

6. Selection of Respondents for Interview Sample 78

7. Research Sample for Pilot Study on Instrumentation 81

8. Schedule of Interviews Conducted in Pilot Study 88

9. Frequency and Percentage Distribution of Male and Female Respondents in Each Group 94

10. Frequency and Percentage Distribution for the Age Categories of Respondents in Each Group 95

11. Frequency and Percentage Distribution for the Occupational Categories Each Group of Respondents 96

12. Frequency and Percentage Distribution for the Income Categories for Each Group of Respondents 97

13. Frequency and Percentage Distribution for the Marital Status for Each Group of Respondents 99

14. Frequency and Percentage Distribution for Respondents In Each Group Who Have School Age Children or Other Dependents Who Require Personal Assistance Before or After Work 100

Table Page

15. Frequency and Percentage Distribution for the Number of Children 18 Years of Age or Less, Living at Home for Each Group of Respondents 101

16. Frequency and Percentage Distribution for the Highest Level of Formal Education for Respondents in Each Group 102

17. Frequency and Percentage Distribution for the Employment Status for the Spouse of Each Group of Respondents 103

18. Frequency and Percentage Distribution for the Employment History Within Respective Branches for Each Group of Respondents 105

19. Means, Standard Deviations and Rank Order of Means for Job Satisfaction 114

20 Scheffe Analysis of Variance for Job Satisfaction: (1) Overall Program in Your Branch 120

21. Scheffe Analysis of Variance for Job Satisfaction: (2) The Way in Which The Program is Organized 123

22. Scheffe Analysis of Variance for Job Satisfaction: (3) Method of Keeping Track of Hours Worked 126

23. Scheffe Analysis of Variance for Job Satisfaction: (4) Freedom on Decisions of Arrival and Departure 128

24. Scheffe Analysis of Variance for Job Satisfaction: (5) Administration of Program by Supervisor 131

25. Scheffe Analysis of Variance for Job Satisfaction: (6) Travel Arrangements To and From Work . 133

26. Scheffe Analysis of Variance for Job Satisfaction: (7) Freedom to Handle Personal Business During the Holiday 135

27. Scheffe Analysis of Variance for Job Satisfaction: (8) Utilization of Bus Service 138

28. Scheffe Analysis of Variance for Job Satisfaction: (9) Changes Which Have Occurred in the Way Work is Done 140

29. Scheffe Analysis of Variance for Job Satisfaction: (10) The Way you Now Complete and Organize Your Work 142

30. Summary of Differences Between Pairs of Group Means for Job Satisfaction 144

31. Scheffe Analysis of Variance for Changes in Organizational Performance: (1) Availability of Personnel With Whom You Must Work 147

32. Scheffe Analysis of Variance for Changes in Organizational Performance: (2) Degree of Participation in Decisions About Work Assignments 150

33. Scheffe Analysis of Variance for Changes in Organizational Performance: (3) Degree of Difficulty in Scheduling Work Requiring Others 152

34. Scheffe Analysis of Variance for Changes in Organizational Performance: (4) Quality of Communication About Work Assignments 154

35. Schefffe Analysis of Variance for Changes in Organizational Performance: (5) Ability to Arrange Meetings with Others When Necessary 156

36. Scheffe Analysis of Variances for Changes in Organizational Performance: (6) Availability of others for 'spur of the Moment' discussions or phone calls 159

37. Scheffe Analysis of Variance for Changes in Organizational Performance: (7) Organization of Work 162

38. Scheffe Analysis of Variance for Changes in Organizational Performance: (8) Availability of Office Equipment 167

39. Scheffee Analysis of Variance for Changes in Organizational Performance: (9) Desirability of Branch as a Place to Work 167

40. Scheffee Analysis of Variance for Changes in OrganizationaL Performance: (10) Degree of Fatigue Associated with Work Assignments 170

Table Page

41. Scheffee Analysis of Variance for Changes in Organizational Performance: (11) Travel To and From Work 173

42. Scheffee Analysis of Variance for Changes in Organizational Performance: (2) The Service Your Branch Provides to Other Branches 177

43. Scheffee Analysis of Variance for changes in Organizational Performance: (13) The Service Your Branch Provides to the Public 180

44. Scheffee Analysis of Variance for Changes in Organizational Performance: (14) Overall Work Performance 187

45. Scheffee Analysis of Variance for Changes in Organizational Performance: (15) The Availability of Services Such as Dining Rooms, Cafeterias and Elevators ... 189

46. Summary of Differences Between Pairs of Group Means for Organizational Performance 192

47 Scheffee Analysis of Variance for Changes in Family Interaction and Personal Relationships: (1) Management of Family Affairs 198

48. Scheffee Anaalysis of Variance for Changes in Family Interaction and : Personal Relationships: (2) Amount of Time Spent With Family. 201

49. Scheffee Analysis of Variance for Changes in Family Interaction and Personal Relationships: (3) Amount of Time Spent With Friends 203

50. Scheffee Analysis of Variance for Changes in Family Interaction and Personal Relationships: (4) Time Available to Organize Your Personal Business Affairs 206

51. Summary of Differences for Pairs of Group Group Means Related to Family Interaction and Personal Relationships 209

52. Frequency and Percentage Distribution for Changes in Leisure Activities -- Standard Hours Group 211

53. Frequency and Percentage Distribution for

Table Page

Changes in Leisure Activities -- Compressed Hours Group 212

54. Frequency and Percentage Distribution for Changes in Leisure Activities -- Flexible Hours Group 213

55. Summary of Important Differences Among Groups Regarding Changes in Leisure Activities 221

56. Frequency and Percentage Distribution Outlining the Relationship Among Members of Commuting Groups 227

57. Frequency and Percentage Distribution for Respondents Outlining the Location of Car Park Facilities 228

58. Frequency and Percentage Distribution for the Comparison of Parking Costs Per Month 228

59. Frequency and Percentage Distribution for the Provision of Parking Space 229

60. Significant Differences Between Management and Non-Management Perceptions of Job Satisfaction - Standard Hours Group 232

61. Discrepancy Analysis for Management and Non-Management Perceptions of Job Satisfaction - Standard Hours Group 235

62. Signficiant Differences Between Management and Non-Management Perceptions of Job Satisfaction - compressed Hours Group 237

63. Discrepancy Analysis for Management and Non-Management Percpetions of Job - Satisfaction Compressed Hours Group 240

64. Significant Differences Between Management and Non-Management - Perceptions of Job Satisfaction -- Flexible Hours Group 241

65. Discrepancy Analysis for Management and Non-Management Perceptions of Job Satisfaction - Flexible Hours Group 244

66. Summary of Intra-Group Discrepancy Ranking for

Table Page

Job Satisfaction 246

67. Significant Differences Between Management and Non-Management - Perceptions of Family Interaction and Personal Relationships - Standard Hours Group 248

68. Significant Differences Between Management and Non-Management Perceptions of Family Interaction and Personal Relationships - Compressed Hours Group 250

69. Significant Differences Between Management and Non-Management Perceptions of Family Interaction and Personal Relationships - Flexible Hours Group 251

70. Significant Differences Between Management and Non-Management Perceptions of Organizational Performance - Standard Hours Group 253

71. Discrepancy Analysis of Management and Non-Management Perceptions of Organizational Performance - Standard Hours Group 257

72. Significant Differences Between Management and Non-Management Perceptions of Organizational Performance - Compressed Hours Group 262

73. Discrepancy Analysis of Management and Non-Management - Perceptions of Organizational Performance - Compressed Hours Group. 266

74. Significant Differences Between Management and Non-Management Perceptions of Organizational Performance - Flexible Hours Group 270

75. Discrepancy Analysis of Management and Non-Management Percpetions of Organizational Performance - Flexible Hours Group 274

76. Summary of Intra-Group Discrepancy Rankings for Organizational Performance 278

77. Correlation Co-efficients for Standard Hours Perceptions of Job Satisfaction 281

78. Correlation Co-efficients for Compressed Hours Perceptions of Job Satisfaction 285

79. Correlation Co-efficients for Flexible Hours

Table Page

Perceptions of Job Satisfaction 287

80. Correlation Co-efficients for Standard Hours Perceptions of Direction of Changes in Organizational Performance 290

81. Correlation Co-efficients for Standard Hours Perceptions of Importance of Changes in Organizational Performance . 294

82. Correlation Co-efficients for Compressed Hours Perceptions of Direction of Changes in Organizational Performance 300

83. Correlation Co-efficients for Compressed Hours Perceptions of Importance of Changes in Organizational Performance 303

84. Correlation Co-efficients for Flexible Hours Perceptions of Direction of Changes in Organizational Performance 306

85. Correlation Co-efficients for Flexible Hours Perceptions of Importance of Changes in Organizational Performance 309

86. Frequency and Percentage Distribution for Method Used to Select Hours of Work for Flextime Respondents 320

87. Frequency and Percentage Distribution of Modal Responses for Comparison of Departure Times Pre and Post Flextime 321

88. Frequency and Percentage Distribution for the Comparison of Arrival Times at Work Pre and Post Flextime 322

89. Frequency and Percentage Distribution of the Motives Underlying Changes in Work Commencement Times for Flextime 323

90 Frequency and Percentage Distribution for the Comparison of Times for Commencement of Lunchbreak Pre and Post Flextime 324

91. Frequency and Percentage Distribution for the Comparison of Times for Termination of Lunchbreaks Pre and Post Flextime 325

92. Frequency and Percentage Distribution for the Motives Underlying Changes in Times for Commencement of Lunchbreak

Table Page

for Flextime Respondents 326

93. Frequency and Percentage Distribution for the Comparison of Departure Times from Worksite Pre and Post Flextime 327

94. Frequency and Percentage Distribution for the Comparison of Times Employees Arrive Home From Work Pre and Post Flextime 328

95. Frequency and Percentage Distribution for the Method Used to Select Hours of Work for Compressed Hours Respondents 329

96. Frequency and Percentage Distribution of Modal Responses for Comparison of Departure Times from Home Pre and Post Compressed Workweek 330

97. Frequency and Percentage Distribution for the Arrival Times at Work Pre and Post Compressed Workweek 331

98. Frequency and Percentage Distribution for the Comparison of Times for Commencement of Lunchbreak Pre and Post Compressed Workweek 332

99. Frequency and Percentage Distribution for the Comparison of Times for the Termination of Lunchbreaks Pre and Post Compressed Workweek 333

100. Frequency and Percentage Distribution for the Comparison of Departure Times from the Worksite Pre and Post Compressed Workweek 334

101. Frequency and Percentage Distribution for the Times Employees Arrive Home from Work Pre and Post Compressed Workweek 335

102. Frequency and Percentage Distribution for Changes in the Level of Consumption Spending for the Compressed Hours Group 337

103. Frequency and Percentage Distribution for Changes in the Composition of Consumption Expenditure for the Compressed Hours Group 338

104 Frequency and Percentage Distribution Outlining the Nature of Child minding services for Compressed Hours Respondents 339

105. Frequency and Percentage Distribution for

Table Page

Responses Concerning the Problematic Nature of Childcare for Compressed Hours Respondents 340

106. Comparison of Absenteeism Rates Pre and Post Flextime 342

107. Frequency and Percentage Distribution for Late Arrivals at the Worksites Pre and Post Flextime 343

108. Comparison of Labor Turnover Rates Pre and Post Flextime 344

109. Comparison of Average Staff Size Pre and Post Flextime 346

110. Comparison of Overtime Rates Pre and Post Flextime 347

111. Comparison of Absenteeism Rates Pre and Post Compressed Workweek 349

112. Frequency and Percentage Distribution for Late Arrivals at the Worksite Pre and Post Compressed Workweek 350

113. Comparison of Labor Turnover Rates Pre and Post Compressed Workweek 351

114. Comparison of Average Staff Size Pre and Post Compressed Workweek 352

115. Comparison of Overtime Rates Pre and Post Compressed Workweek 353

116. Frequency and Percentage Distribution for Standard Hours Responses Relating to the Potential Adoption of a Re-arranged Workweek 355

117. Reasons for Maintaining Standard Hours Programs as Commented Upon by Standard Hour Respondents 355

118. Frequency and Percentage Distribution for Standard Hours Respondents Preferences Concerning the Adoption of a Re-arranged Workweek 358

119. Advantages of a Flextime Model as commented Upon by Standard Hours Respondents 359

120. Advantages of a Compressed Hour Model as Commented Upon by Standard Hours Respondents 363

Table Page

121. Factor Analysis for Pilot Study - Job Satisfaction 430

122. Factor Analysis for Pilot Study - Organizational Performance 431

123. Pearson r Correlation Co-efficients for Pilot Study - Standard Hours Group 433

124. Pearson r Correlation Co-efficients for Pilot Study - Compressed Hours Group 434

125. Pearson r Correlation Co-efficients for Pilot Study - Flexible Hours Group 435

126. Scheffe Analysis of Variance for Pilot Study - Job Satisfaction 437

127. Scheffe Analysis of Variance for Pilot Study - Organizational Performance and Direction of Changes 438

128. Factor Analysis for All Respondents Perceptions of Job Satisfaction 440

129. Factor Analysis for Respondents Perceptions of Changes in Direction of Organizational Performance 441

130. Frequency and Percentage Distribution for Changes in Service to the Public - Compressed Hours Group 446

131 Frequency and Percentage Distribution for Changes in Service to the Public - Flexible Hours Group 447

132. Raw Data for Comparison of Absenteeism Rates Pre and Post Flextime 449

133. Raw Data for Comparison of Labor Turnover Rates Pre and Post Flextime 450

134. Raw Data for Conferences of Flextime Rates Pre and Post Flextime 451

135. Raw Data for Comparison of Average Staff Size Pre and Post Flextime 452

136. Raw Data for Comparison of Absenteeism Rules Pre and Post Compressed Workweek 454

137. Raw Data for comparison of Labor Turnover Rates Pre and Post Compressed Workweek ... 455

Table Page

138. Raw Data for Comparison Overtimes Rates Pre and Post Compressed Workweek 456

139. Raw Data for Comparison of Average Staff Sizes Pre and Post Compressed Workweek 457

140. Variable Listing for Job Satisfaction Items .. 459

141. Variable Listing for Organizational Performance Items 460

LIST OF APPENDICES

Appendix Page

A. Function Analysis of Organization Chart for the Alberta Department of Education 427

B. Factor Analysis for Pilot Study on Instrumentation 429

C. Correlation Analysis for Pilot Study on Instrumentation 432

D. Scheffe Analysis of Variance for Pilot Study on Instrumentation 436

E. Factor Analysis for Job Satisfaction and Organizational Performance Scores for all Groups of Respondents 439

F. Client Perceptions of Changes in Service to the Public Questionnaire 443

G. Raw Data Utilized to Develop Indices for Changes in Operational Cost for Flextime Branches 448

H. Raw Data Utilized to Develop Indices for Changes in Operational Costs for Compressed Hours Branch 453

I. Variable listing for Job Satisfaction and Organizational Performance Items Used in Correlation Analysis 458

LIST OF FIGURES

Figure Page

1. A Flextime Model of Time Allocation 24

2. Alberta Department of Education Flextime Model of Time Allocation 25

3. Compressed and Standard Hours Models of Time Allocation 28

4. A Paradigm of the Adoption of an Innovation 32

5. Indifference Curve Analysis for 4/40 Compressed Workweek 45

6. Indifference Curve Analysis for 4/32 Compressed Workweek 46

7. Hellreigel Model for the Evaluation of a Compressed Workweek 62

8. Organization Chart for the Alberta Department of Education 69

9. Factor Analysis for Pilot Study on Instrumentation 442

10. Profile of Standard Compressed and and Flexible Hours Priorities for Job Satisfaction Variables 115

11. Percentage Distribution Outlining the Mode of Travel to and From Work for All Group of Respondents 223

12. Percentage Distribution Outlining the Number of Members in Carpools for All Groups of Respondents 225

13. Profile of Standard Hours Management and Non-Management Mean Scores for Job Satisfaction 234

14. Profile of Compressed Hours Management and Non-Management Mean Scores for Job Satisfaction 239

15. Profile of Flexible Hours Management and Non-Management Mean Scores for

Job Satisfaction 243

16. Profile of Standard Hours Management and Non-Management Means Relating to Direction of Changes in Organizational Performance 256

17. Profile of Standard Hours Management and Non-Management Means Relating to Importance of Changes in Organizational Performance 260

18. Profile of Compressed Hours Management and Non-Management Means Relating to Direction of Changes in Organizational Performance 264

19. Profile of Compressed Hours Management and Non-Management Means Relating to Importance of Changes in Organizational Performance .. 268

20. Profile of Flexible Hours Management and Non-Management Means Relating to the Direction of Change in Organizational Performance ... 273

21. Profile of Flexible Hours Management and Non-Management Means Relating to the Importance of Change in Organizational Performance ... 276

22. Summary of the Major Characteristics of the Alberta Department of Education Flextime Model 319

23. Summary of Major Characteristics of the Alberta Department of Education Compressed Hours Model 319

CHAPTER I

DEFINITION AND DISCUSSION OF THE PROBLEM

> Some men see things as they are and say: why?
> I dream of things that never were and say: why not?
> G.B. Shaw

INTRODUCTION

In 1926 Henry Ford introduced the 5 day week to workers (while maintaining a 6 day pay equivalent) in the automobile industry, and this perhaps represented the most significant innovation in the management of time since the industrial revolution.[1] This 5 day, 40 hour week (5/40) was considered beneficial to the worker because it provided increased leisure as well as the opportunity for increased consumption. But, with the exception of the 5/40 work week, neither management nor organized labour had expressed any further commitment towards an examination of the organization of time and its relation to productivity until the 1960's. Despite the fact that during this period there has been a consistent trend towards a decrease in the Standard hours of work, the rate of decline has been somewhat erratic, and little attention had been devoted towards innovations in the structure of the working hours.

Thus, throughout most of the 20th Century organized labour and management have focused upon changes in the level of income and fringe benefits as a reward for increased productivity, rather than a reduction or re-organization of working hours.

---

[1] Some interest expressed during the depression in 1930's, but not operationalized.

In the 1960's because of the large increases in productivity at this time, both labour and management in many industries, (including some school districts) began to examine various innovation in the management of time and the prospects for increased leisure.

Marks (1974:2) commentary on introduction of flexible hours in the Canadian Federal Public service stated:

> Over the past several years, trends have developed an awareness on the part of management, employees and unions of the need to re-examine established work patterns and to consider new approaches that are more compatible with changing life styles. People of all ages now place a greater value on self-fulfillment in their personal life and demand a larger degree of participation in determining their work - and leisure - time allocations.

New models for the organization of time such as "flex-time", "time banks", and the "compressed work week" have emerged, and many of these innovations are being closely examined by labor and management groups in a variety of industrial settings. For example Harrison (1972) noted that between 1971 and 1972 the number of companies introducing a compressed work week in North America increased tenfold. More specifically, within Canada a Federal Department of

Labor Survey in 1973 estimated that there were over 233 plants across Canada operating in a compressed work week.

Furthermore, Poor (1973) and Elbing et.al. (1973) emphasized that there were in excess of 3,000 firms on a rearranged work week in the United States, including service industries such as hospitals, (nurses only on 4 day week/3 day week, alternatively), insurance firms, banks, and schools.

Alternatively, Carmel (1973:196) noted that in some of the European countries such as Switzerland, approximately 30% of the labor force is on flex-time. Elbing et.al. (1974:18), emphasized the importance of flex-time in Europe when they stated:

> In Europe companies have adopted some form of flexible working hours plan. Started in West Germany in 1967, the idea was picked up in Austria and Switzerland and even in Scandanavia. From there it spread southward to France Benelux, Italy, Spain and to the United Kingdom. Today, in West Germany alone, over 3,000 companies use some form of flexible hours; this directly involves over 1 million employees.

Elbing et.al. (1974:18-30) also emphasize that in North America in the 1970's, most attention has been focused around the implementation of a compressed work week, but if North American experiences parallel's Europe's, flexible hours may sweep the country in the next few years.

Other innovations in the arrangement of time have been considered, such at Time Banks, where a worker can build up credit hours by working as long as he likes in a given day. Once a certain number of credit hours has been obtained, the worker is entitled to a paid vacation period. As yet no experimentation has been done in this area, but it presents interesting possibilities for reducing unemployment insurance due to seasonal conditions of work.

It is important to emphasize that there is still a very small percentage of Canadian workers and establishments on a work schedule that compresses 40 or more hours into less than 5 working days per week, which means a lengthened working day of more than 8 hours. Waisglass (1974:3) stated:

> In most cases, the compressed work week has been introduced by management for comparatively small work groups, in service type occupations and industries, and in the absence of a union.

However there is some evidence, that this trend is changing and many large labor groups are becoming involved in the re-arranged work weeks, as evidenced by reports and studies such as the Ontario Ministry of Labor report (1972), Goodale and Aagaard (1975), Elbing, Nanus and Adelman (1971), Hellreigel (1972), Rempel (1974,1972), Ivaneevich (1974) Nord and Costigan (1973), Poor (1973), Hameed and Paul (1972). Similarily the demands from the international union 'The United Auto Workers Union' (U.A.W.) emphasized demands for increased leisure for their members in 1976 negotiations with management.

Further evidence of this trend towards restructuring the work week can be seen in the public sector in Canada. In Ottawa, a recent study undertaken by the Treasury Board (1976) examined the effects of flexible working hours upon government employees, who had been involved in this scheme for the past two years. Similarly, within the Provincial Government in Alberta, the Department of Education is also involved in experimentation with various re-arrangements in the management of time involving groups working under both flex-time incorporating some aspects of time banks and compressed work week time allocations.

It is the spreading of interest towards these large labor groups within the public sector that provides the impetus for this study.

As yet there is little information available concerning the impact of these organizational changes. This research focuses upon the impact of such organizational changes within the various branches of the Department of Education.

STATEMENT OF THE PROBLEM

General Statement of the Problem

The major purpose of this study is to examine the effects of alterations in the structuring of the workweek upon the operation of an organization. The basic problem is to determine if there are any significant differences in the perception of the operation of the organization among and between management and non-management personnel involved in different workweek structures.

Specific Statement of the Sub Problems

From the foregoing general statement of the problem, the following specific statements were developed. These statements were used to provide direction for the general development of the study.

A) The following research questions were investigated in worksites utilizing one of the following time structures: Flexitime, Standard Hours or compressed work week.

1. (a) To what extent are there differences in the level of job satisfaction between management/non-management personnel employed across these 3 time structures?

(b) To what extent are there differences in the level of job satisfaction between management/non-management personnel employed within any one of these time structures?

(c) To what extent can job satisfaction variables be identified upon which the total personnal for all groups generally agree?

(d) To what extent can job satisfaction variables be identified upon which management and non-management personnel within a given workweek structure agree?

(e) To what extent do these groups agree on the discrepancy ranking of these job satisfaction items.

2. (a) To what extent are there differences in perceptions of organizational performance between management/non-management personnel employed __across__ these three time structures?

(b) To what extent are there differences in perceptions of organizational performance between management/non-management personnel employed __within__ any one of these three time structures?

(c) To what extent can organizational performance variables be identified upon which management and non-management personnel within a given workweek structure agree?

(d) To what extent do these groups agree on the discrepancy ranking of these organizational performance items.

3. (a) To what extent are there differences concerning family interaction and family relationships between management/non-management personnel employed __across__ these three time structures?

(b) To what extent are there differences concerning family interaction and family relationships between management/ non-management personnel employed __within__ any one of these three time structures?

4. (a) To what extent are there differences concerning participation in leisure activities between the total personnel employed __across__ these three time structures?

5. To what extent are their differences in commuting

patterns and travel arrangements among groups involved in different work week structures.

6. (a) To what extent are the perceptions of total personnel concerning job satisfaction related to certain variables descriptive of these groups? This research question can be stated in more detail as follows.

Is there a relationship between total personnel perceptions of job satisfaction within a specific time structure and each of the following variables:

a) Personal Variables - Age, sex

b) Social Variables - Marital status
- Number of children
- Employment status of spouse

c) Economic Variables - Income

d) Educational Variables - Level of education

7. To what extent are the perceptions of total personnel concerning organizational performance related to certain variables descriptive of these groups. This research question can be stated in more detail as follows:

Is there a relationship between the total personnel perceptions of organizational performance associated with a specific time structure and each of the following variables.

(a) Personal Variables - Age, sex

(b) Social Variables - Marital status
- Number of children

- Employment status of spouse

c) Economic Variables - Income

d) Educational Variables - Level of education

B) Following research questions apply to one specific sub-population only.

(1) Flexi-time Sub Population

(a) To what extent have operating costs such as overtime, additions to staff, labor turnover, and absenteeism changed after the introduction of the specific re-arrangement in the work week?

(b) To what extent has the introduction of flextime been associated with changes in the pattern of working hours of respondents.

(2) Compressed Work Week

(a) To what extent has there been a change in the amount, and patterns of consumption of participants in the compressed work work week structure?

(b) How are family responsibilities effected by longer working hours. e.g. who looks after children after school?

(c) To what extent have operating costs such as overtime, additions to staff, absenteeism and labor turnover, changed since the introduction of the compressed work week.

(d) To what extent has the introduction of the compressed work week been associated with changes in the pattern of working hours of respondents.

(3) Standard Hours Group

(a) For what reasons has this group not adopted one of these innovations in the management of time?

(b) What problems and limitations do these groups see for themselves if a compressed work week or flexi-time was adopted?

ASSUMPTIONS

The researcher emphasized the following assumptions concerning the research design and data analysis utilized in his research study. First, it was assumed that the questionnaire and interview schedules developed to measure comparative perceptions of organizational change arising from alterations in the structuring of the work week obtained valid and accurate measurements of the variables being studies. Problems associated with perceptual distortion were assumed to be a minimum.

Secondly, it was assumed that the respondents' replies to the questionnaire were independent judgements and truly reflect their own opinion.

Thirdly it was assumed that the size of the stratified random sample of administrative and non-administrative personnel was adequate to reveal statistically significant results.

Fourthly, it was assumed that the Likert type scale used in section C of the Questionnaire was interval properities. This was required for the statistical analysis of the data gathered.

Finally it was assumed that the results obtained from the groups constituting of the stratified random sample were representative of the administrative and non-administrative perceptions within the organization.

LIMITATIONS

One limitation arose because this study is concerned with an examination of new organizational innovations in the management of time. Because this study is concerned with the effects of a recent change it is possible that the results obtained could be influenced by a Hawthorne effect. Cook (1969:199) presented the following defintion of the Hawthorne concept:

> The Hawthorne effect is a phenomenon characterized by a awareness on the part of the subjects of special treatment created by artificial experimental conditions. This awareness becomes confounded with the independent variable under study, with a subsequent facilitating effect on the dependent variable, thus leading to ambiguous results.

The relationship of this problem to educational research, that undertakes an examination of an organizational innovation or change was further commented upon by Cook (1969:204) who stated:

> Methodologyically, the procedure followed by the illumination investigators is not unlike that often observed in educational research. A change is introduced and promising results are secured. This promising lead is followed up carefully by controled experimentation to study more precisely the effects of the change. The results are too often similar to those obtained in the illuminaton experiments. Regardless of what is done, we have difficulty in attributing observed changes in the dependant variable directly to the manipulated independant variable.

Thus because some of the respondents in this study, could be seen to represent an experimental group, namely those involved in innovations such as flexi-time and compressed work weeks, it is feasible that the responses could exhibit attributes of Hawthorne effect. However, because these groups have been working under these innovations for more than two years, it is likely that this effect will be minimal.

A second limitation arises because this study is concerned with perceptions concerning alterations in the work week and therefore it is necessary to be aware of some of the problems involved in perception. Enns (1966:1) stated:

> Perceptions are not simple accurate reproductions of objective reality. Rather they are usually distored, colored, incomplete and highly subjective revisions of reality.

Furthermore the Thomas Theorem in sociology states that "if people perceive something to be real it will be real for them in terms of its consequences". In so far as this may be the case, the difficulty in avoiding perceptual distortion needs to be emphasized, and it is quite probable that different members in an organization, perceiving the same event, differently. In this study this limitation applies to the perception of the impact upon organizational operations of the restructuring of the work week.

A third limitation of this study arises because the data was gathered from only one government department, namely The Department of Education. Thus these findings should be viewed as exploratory within this limited context and should not be taken as a basis for generalization to other government departments or to organizations in general

A final limitation arises because of the recent nature of innovations in the management of time within organizations. There is a relative paucity of literature on this subject and there are few comprehensive research studies available at this time. Much of the literature in this field is obtained from articles appearing in a wide variety of social science and business journals.

DELIMITATIONS

The following are the delimitations of this study:

1. The study was delimited to the Alberta Department of Education. Not all branches were able to cooperate in the study as for example no data was available from the Alberta School for the Deaf.

2. The stratified random sample of respondents was delimited to all personnel who had worked for at least two months within each Branch of the Department of Education.

DEFINITION OF TERMS

Compressed Work Week

This reduces the number of working days from the standard 5 days to 3 or 4 days. The number of hours per week remains unchanged which implies a proportionate increase in daily hours. This could also involve a longer work cycle such as fortnight or a month: in this case the term used is "compressed work week schedule." In some cases employees alternate a 5 day/4 day week.

Flexible Work Week

In this sytem there is a core period each day during which all the workers are required to be on the job, but both in the morning and in the evening there is a flexible time period (flex-time) during which the workers have freedom to come and go at anytime, provided they work the total number of required hours.

Fully Flexible System

Within the time limits established by departments, employees are permitted each day to choose the time they prefer to start and finish work, so long as they work a perscribed number of hours.

Fixed Flexible Systems

With time limits established by Departments employees state the time they will start and finish work, subject to management approval. An employee is requested to start and finish work each day at the approved time for a prescribed period of a week, month etc.

Staggered Hours

In this system there are fixed starting and stopping times, to which all employees in a group activity or organizational unit must conform, and these are usually dependant on the nature of the organizational unit. Sometimes staggered hours partially overlap the hours worked by a second employee to facilitate communication and maintain continuity in the provision of service for a requird period of time.

Reduced and Re-arranged Work Week

Here the week is shortened and the daily hours are also reduced. For example under the Ministry of Transport Regulations in Canada, airline pilots work a maximum of 120 hours per month and 1200 hours per year. (i.e. approximatley 27 hours per week).

Time Banks

In this sytem of time allocation an employee can build up credit hours by working as long as he likes in a given day. Once a certain number of credit hours have been obtained, the work is entitled to a paid vacation period. This type of time structure presents interesting possibilities in industries that experience seasonal conditions of work.

Standard Hours

Standard hours of work are laid down in provincial and federal labor legislation. For example, Carmel (1973:192) noted that most office workers in Canada work approximately 37.5 hours per week in 1973, spread over five working days.

Paid for Hours

Paid for hours of work reflect the actual cost of labor within a specific organization. In addition to the cost of Standard Hours (5/37.5), they also include the incidence of other costs such as overtime and bonuses.

Actual Hours

Actual hours of work reflect trends in economic activity and account for the incidence of paid holidays, paid vacations and paid sick leave.

Perception

Perception refers to the process by which one attributes significance to his immediate environmental situation as influenced by characteristics of the perceiver, characteristics of the perceived and the institutional influences in which the perception occurs.

Hawthorne effect

Cook (1969:199) stated that this effect is characterized by an awareness of the part of the subjects of special treatment creased by artificical experimental conditions. This awareness becomes confounded with the independant variable under study, with a subsequent facilitating effect on the dependant variable, thus leading to ambiguous results. Within educational research a similar effect may occur when studying the effect of a recent innovation or change upon respondents.

Organizational Performance

For the purposes of this study organizational performance is operationally defined to examine factors such as: (1) Organizational Communication; (2) Service to the

Public; (3) Individual output; (4) Work scheduling and (5) Availability of Recreation services.

Job Satisfaction

For the purposes of this study job satisfaction is operationally defined to examine factors such as: (1) Schedule Monitoring; (2) Individual Autonomy; (3) Organization of work and (4) Changes in work routine.

Organizational Change

This study focused upon the impact of planned changes in the management of time within a government organization. Bennis and Chin (1967:33) defined planned change as "the conscious utilization and application of knowledge as an instrument or tool for modifying patterns and institutions of practice."

Discrepancy Ranking

For the purposes of this study, this concept refers to the absolute difference between management and non-management means scores for a particular item.

ORGANIZATION OF THE THESIS

A review of the literature and conceptual framework is presented in the following chapter. The Roger's adoption model for organizational change process is presented and attention is focused upon historical trends in the hours of work, and recent studies of various impacts on organizations arising from innovations in the management of time. This is followed in Chapter 3 by a discussion of the research design, and the characteristics of the respondents involved in the study. Chapter 4, 5, 6, and 7 will be concerned with an analysis of the data and research findings. Finally, Chapter 8 will present a summary, conclusions, implications and recommendations for future research.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND A REVIEW OF THE RELATED LITERATURE

This chapter focuses upon the development of a conceptual framework and a review of the related literature concerning the process of organizational change and innovations in the management of time.

This chapter is divided into three major sections. The first section examines the concept of organizational change from two points of view: (1) the content of organizational change; (2) organizational change as a process.

Secondly, these two aspects of organizational change provide the framework for the remaining discussion within this chapter. The first section examines the content of organizational changes concerning innovations in the management of time. This is followed by an examination of the relationship between organizational change as a process and restructuring of the work week.

ORGANIZATIONAL CHANGE AND ALTERATIONS IN THE WORK WEEK

Introduction

Toffler (1970:12) stated:

> "... that if the last 50,000 years of man's existence were divided into lifetimes of approximately sixty-two years each, there have been approximately 800 such lifetimes. Of these 800, fully 650 were spent in caves.
>
> Only during the last seventy lifetimes has it been possible to communicate effectively from one lifetime to another -- as writing made it possible to do. Only during the last four has it been possible to measure time with any precision. Only in the last two has anyone anywhere used an electric motor. And the overwhelming majority of all the material goods we use in daily life today have been developed within the present 800th lifetime.
>
> This 800th lifetime makes a sharp break with all past human experience because during this lifetime man's relationship to resources has reversed itself.

This quotation from Toffler illustrates clearly the rapid and continuous nature of change especially in the twentith century. Education and educational organizations of all levels in North America provide clear evidence of this rapid pace of change. For example, the open school concept; differentiated staffing practices; teaching aids; individualized instruction; total immersion learning; teaching machines; computer assisted instruction; student power movements; wide use of media and technology; and new modes of administration such as regional offices, are just some of the philosophical, functional and structural changes affecting educational organizations, in our society.

However one of the most profound changes effecting many organizations in North America over the past several years has been the increased awareness on the part of employees, trade unions and administrators to re- examine established work patterns and time structures with a view to considering new approaches that are more compatible with changing life styles. Human resources writers such as Miles (1965) emphasize the need to recognize the demands of people for greater self-fullfillment in their personal life, involving participative decision making approaches to determine many aspects of their work - and leisure - time allocations.

Understanding the Change Process

Ingram (1969:2) stated that until recently very little was known about the process by which change takes place, because of our failure until recently to systematically isolate define and study all aspects of change pheromena. However most writers in the field of organizational change agree that change has two major dimensions - content and process. Thus a change such as an alteration in the structuring of the work week can be viewed in terms of the substance of the innovation itself. Alternatively, a change in the structuring of the work week could also be examined from the viewpoint of the steps organizational participants go through in deciding whether or not to adopt this innovation.

The two aspects of organizational change will provide the framework for the following discussion regarding the effects of alterations in the work week.

ORGANIZATIONAL CHANGE AS CONTENT AND ALTERATIONS IN THE WORK WEEK

This section of the literature review will serve to provide an overview of the substance of the various innovations in the management of time.

(A) Flextime Models of Time Allocation

Golembiewski et.al. (1974:503-32) in their study of Research and Development Organizations presented the following model of flexi-time.

This model of flexi-time incorporates the following major features:

(1) The flexible work hours of employees were subject to work requirements of the department concerned, and the approval of the immediate supervisor. On occasion, the demands of the job or the preference of a supervisor may require that certain hours be kept. This would apply particularly if there was an interface problem with another department.

(2) The lunch period was not flexible, and 45

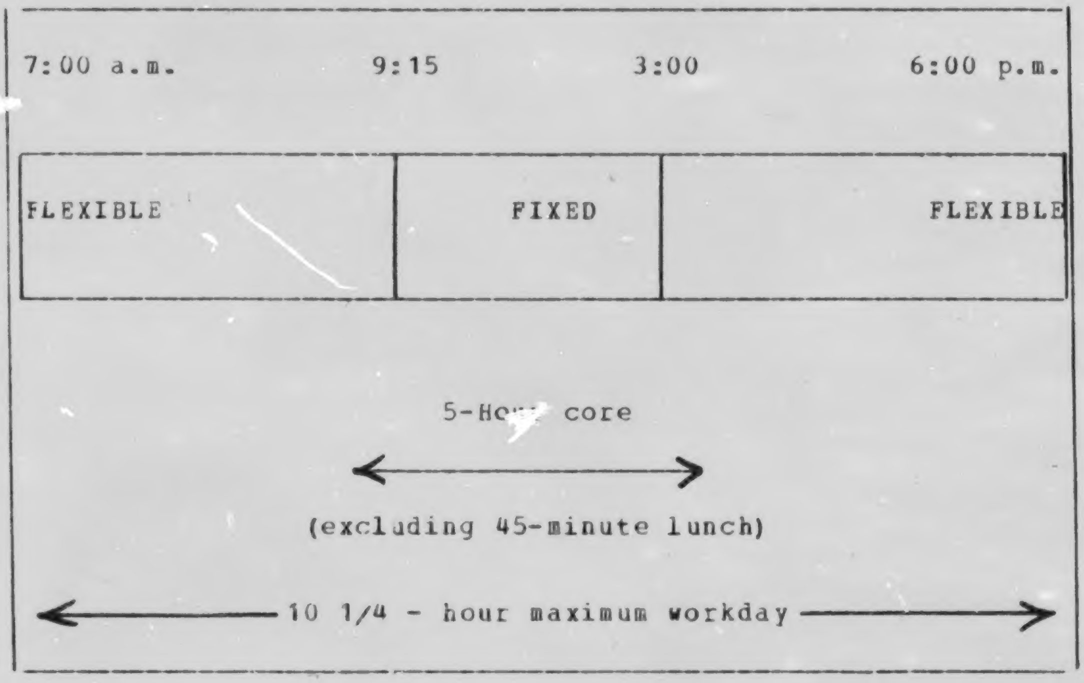

7:00 a.m.
9:15
3:00
6:00 p.m.
FLEXIBLE
FIXED
FLEXIBLE
5-Hour core
(excluding 45-minute lunch)
10 1/4 - hour maximum workday

Figure 1

A Flextime Model

minutes was allocated for this.

(3) Hours in excess of 35 in a week may not be "banked" for a following week.

Many other variations of this flexible model are operationalized in other organizations. For example, within the Alberta Department of Education the following model of flextime is used in a modified form by most of the ten branches involved in flextime experiments. This model is shown in Figure 2.

(1) The major difference in this model is that there

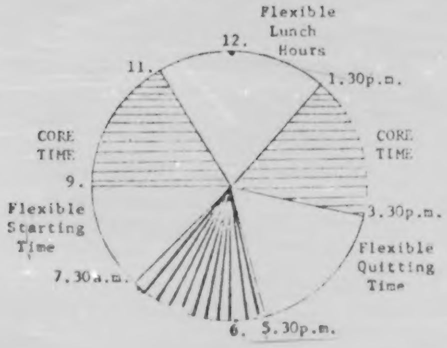


Figure 2

Alberta Department of Education Flextime
Model of Time Allocation

is considerable flexibility in the lunch period with a possible maximum period of two and one half hours, with a minimum of 30 minutes as passed down by Department of Labor Regulations.

(2) Core hours (when all employees must be at work) will be between 9:00 a.m. and 11:30 a.m., and between 1;30 p.m. and 3;30 p.m.. Flexible hours will be between 7:30 a.m. and 9:00 a.m., between 11:30 a.m. and 1:30 p.m., and between 3:30 p.m. and 5:30 p.m.. Employees may make up required hours beyond core hours, during the flexible periods, subject to the condition that there is work to be done.

(3) As a general rule, all employees will be at work during the core hours of each work day of the week. Exceptions to this rule may only be occasional, and then only by special arrangement with the Directors of these branches or their delegates."

(4) The coffee break of fifteen minutes each half day shall be maintained.

(5) Official business hours shall continue to be from 8:15 a.m. - 12:00 noon, and from 1:00 p.m. to 4:30 p.m..

(6) In order to maintain efficient service to the public, management shall have the option of requiring certain categories of employees to: (a) work during standard government office hours continuously. (b) work standard government hours for such periods of time during the year as deemed by managment to be required for assuring efficient service. (c) Work on a restricted flexible schedule (for example generally following a regular work schedule, but being allowed occasional flexibility as special needs arise): (d) Work on short-term predetermined schedules as necessitated by the work situation.

Time Banks

(1) A ten-hour carry-over, either in the way of a bank or a deficit will be allowed, and regular monthly salary shall be paid provided the employee's time is within these limitations. An employee may not accumulate a bank in excess of 10 hours and, if at the end of any month his deficit is more than 10 hours, he shall be deducted for

those hours that are in excess of 10 hours.

(2) The banked hours may be taken, as time off with pay in subsequent months in any combination of hours up to a maximum of one working day. Time off must be in conformance with the needs of the work situation, and have prior approval of the Director of the particular branch, or his delegate'(s).

(3) When time off with pay, in lieu of banked time, amounts to a full day, it shall not be taken in conjunction with a statutory holiday.

(4) When time off with pay, of less than one-half day, is requested such time shall not normally be taken during core times.

(5) Authorized overtime hours worked outside of flex or core times may not be used to cover deficits arising from regular monthly work requirements.

(6) Time off for accumulated time shall be on a one-to-one hourly exchange.

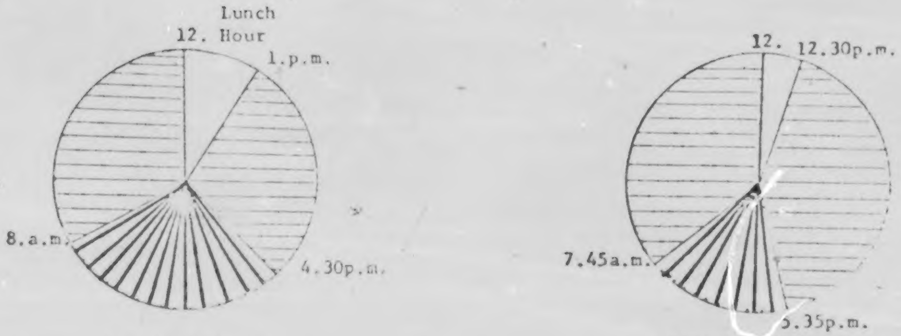
Compressed Work Week Model of Time Allocation

Similarly to flextime there are a number of variations in the application of the compressed work week concept. Two of the major innovations will be discussed, namely: (1) The Compressed Work Week, and (2) the Compressed

Work Week Schedule.

(1) A Compressed Work Week Model of Time Allocation.

A traditional 4/40 work week can most clearly be understood in a reference to a traditional standard 5/40 work week system as outlined in Figure 3.



Standard Hours

Compressed Hours

Figure 3

Compressed and Standard Hours Models of Time Allocation.

In both cases organizations must work a 37.25 hour week as laid down in Labor Regulations. However these two models of time allocations can be contrasted as follows.

(1) Within the Standard Hours system approximately 7 hours 30 minutes are worked each day for 5 days to achieve

the 37.25 total working hours required. Also a fixed one hour lunch break is usually incorporated into this 5/37.25 model.

(2) Alternatively, within the Compressed Work Week Model employees must also work a 37.25 hour week. However this is achieved in 4 working days instead of 5 and thus the fifth day is available for leisure or alternative activities.

In this compressed work week model workers must work for approximately 9 hours 20 minutes each day for 4 days to achieve the total weekly hours required. This may involve any one, or all three of the following modifications in the working day:

a) Earlier starting time

b) Shorter Lunch Period

c) Later Quitting time.

In the above model all of these aspects are incorporated into the model to achieve the 8 hour 20 minutes working day requird for the 4/37.25 hour week.

(2) A Compressed Work Week Schedule

Many variants of the above compressed work week model previously outlined are employed within organizations.

For example, with the Alberta Department of Education, Finance, Statistics and Legislative Branch a specific form of a compressed work week schedule has been employed as follows.

1. The hours of work are from 8:00 a.m. to 4:35 p.m. with half an hour for lunch for nine days with one day off during a two week period. This had the following results: (a) Each employee worked 15 minutes longer than required every two weeks. Thus for the 2 pay days each month each employee is given fifteen minutes longer for lunch to compensate for this. (b) Efforts were made to provide constant service to the public by keeping the office open during lunch hours and staggered lunch hours. (c) Each section head is responsible for monitoring the attendance of each employee under his jurisdiction.

ORGANIZATIONAL CHANGE AS A PROCESS AND ALTERATIONS IN THE WORK WEEK

Many approaches have been presented to study the change process such as Roger Roger's Adoption Theory (1962), Lewin's Force Field Model (1947), and Havelock's Planning for Innovations Through Dissemination and Utilization of Knowledge (1971).

Planned organizational change is an extremely complex phenomena, and as such requires complex theories to explain its efficacy. It is not possible to discuss all the approaches that have been used in recent times to examine organizational change, and for the purposes of this study the Rogers Adoption Theory model will provide the framework for this research.

Roger's Adoption Theory

Rogers, a rural sociologist formulated his theory from a synthesis of the findings of the 500 studies of innovations in fields including education, agriculture and medicine, and has his theory is based on empirical findings. Ingram (1969) presented a paradigm to summarize Roger's Adoption Theory. This paradigm is presented in Figure 4.

For conceptual purposes Rogers model arbitrarily breaks the adoption process into 5 steps. However, Rogers (1962:79) pointed out that:

> "... the number of stages in the process is selected primarily on the basis of ease of conceptualization. Either more or fewer stages might be postulated in the adoption process, but further subdivision needs to be pursued only if the fruitfulness of the analysis is enhanced."

The Adoption Process

Within an organization Rogers states that organizational members pass through the following 5 stages in adopting a new idea. It should be noted that some individuals pass though these phases more rapidly than

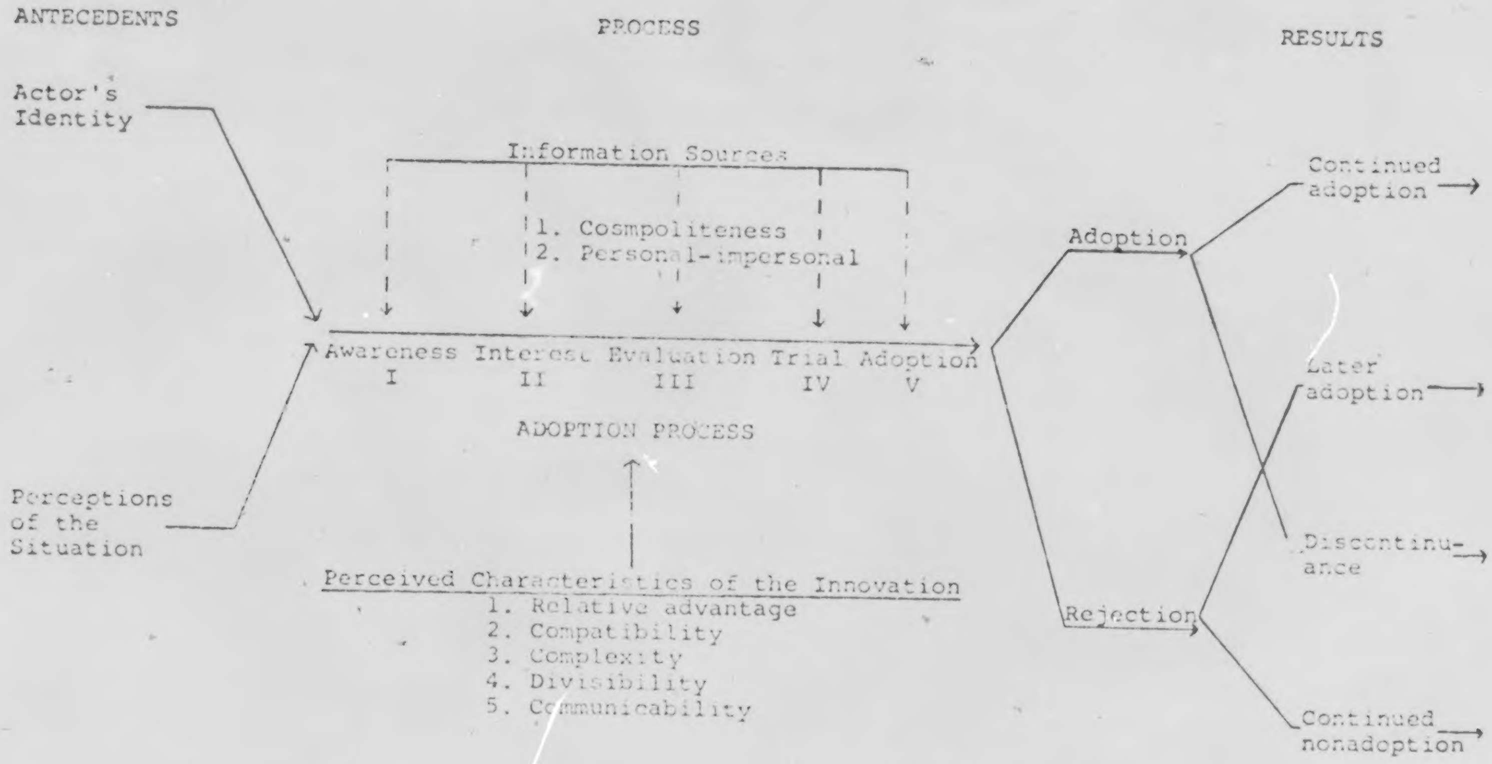

ANTECEDENTS
PROCESS
RESULTS
Actor's Identity
Perceptions of the Situation
Information Sources
1. Cosmpoliteness
2. Personal-impersonal
Awareness I
Interest II
Evaluation III
Trial IV
Adoption V
ADOPTION PROCESS
Perceived Characteristics of the Innovation
1. Relative advantage
2. Compatibility
3. Complexity
4. Divisibility
5. Communicability
Adoption
Rejection
Continued adoption
Later adoption
Discontinuance
Continued nonadoption

Figure 4. Paradigm of the Adoption of an Innovation

(From Rogers - *Diffusion of Innovations*) others and some organizational participants' emphasize one phase more than others do.

(a) The Awareness Stage

During the awareness stage the individual is exposed to the innovation but lacks complete information about it. The organizational participant is aware of the innovation, but is not yet motivated to seek further information.

To fully understand for reasons for the relative recent appearance of this awareness stage among organizational participants in North America, it is essential to understand the historical development of trends in hours of work in the 20th century, that have given rise to the implementation of flexitime and compressed work week innovations in government organizations and industrial concerns across Canada.

With the exception of the 5/40 workweek, few innovations in the management of time have been adopted in the 20th Century. However, in the mid-1960's new interest in innovations in time allocation and the potential for greater leisure emerged in North America. Part of the reasons for this renewed interest in increased leisure and innovations in the management of time, can be explained by an examination of the trends in standard, actual and paid for hours of work during the 20th Century.

Historical Development

Hameed (1974:7-30) emphasises that since the turn of the 20th Century, Standard Hours have registered a steep decline, in the first two decades registering an annual reduction of .63 percent. In the post war II period (1945-1956) the reduction was even greater i.e. 1.44 percent per annum. The intervening span appears almost like a plateau extending over a period of 25 years (1929-44) and registered a very modest decline of .11 percent per year. Since 1957 a second plateau seems to have developed (see Table 1) although during this period there have been substantial increases in productivity that could have enabled a decrease in Standard Hours. The potential for this reduction is evidenced by the increase in paid for hours, which involves labour time that is not directly productive. For example, Hameed (1973;a) noted that fringe benefits, as a percentage of payroll, almost doubled during this period. (From 1.2% in 1957 to 28.5% in 1956).

Further comparison between "Hours paid for" and "Actual Hours" worked as presented below in Table II, also serves to illustrate the growing area of fringe benefits. For example in the post war II period (1949-65) actual hours worked declined faster (10.11 percent) than hours paid for (4.85 percent), and this difference is accounted for by the growing incidence of paid holidays, paid vacations and paid

Table 1

Historical Trends in Standard Hours of Work

	1901 1919	1920 1944	1945 1956	1957 1969
Average Annual Percentage Reduction		0.11	0.63 1.44	0.14
Total Percentage Reduction	12.1	2.6	15.9	1.7

Source: Hameed, S.M.A. op.cit. p.8

sick leave. Hameed (1973:a) emphasized that:

> This development may be regarded as a major shift in the workers outlook on work and leisure. Previously their main emphasis was on reducing the standard work week which meant overtime earnings at the cost of leisure, but it appears that in the 60's their efforts were geared to reducing the effective work week. This implies a reduction in actual hours worked, accompanied by a higher incidence of paid leisure.

Thus the trends in Standard Hours, actual hours, and paid for hours of work during the 1960's indicate the considerable potential for a reduction in the hours of work and/or a re-arrangement of the work week incorporating innovations such as flexible working hours or a compressed work week. During the late 1960's and early 1970's, administrators, trade unionists and employees became increasingly aware of the potential for allocations in the

Table 2

Historical Trends in Standard, Actual and Paid for Hours of Work

	Percentage Reduction		
	1949 1960	1960 1965	1949 1965
Standard Hours	-7.55	-1.20	-8.67
Hours Paid For	-5.31	+0.49	-4.85
Actual Hours Worked	-8.05	-3.0	-10.11

Source: Hameed, S.M.A. op.cit. p. 8

structuring of the work week.

(b) The Interest Stage

During the interest stage organizational members became interested in the innovation and seek information about it.

Many of the reasons underlying the generation of interest in flextime are discussed by Golowbiewski et.al. (1974).

Golembiewski et.al. (1974:508) who undertook a longitudinal study of the organizational effects of flexitime structures, emphasized the need for innovations in the management of time, when they stated:

> ... hours of work are ubiquitous if mundane feature of much work, with which there is little experimentation. A subtle lock step exists in practice. Most people in most organizations begin work at the same time, and they finish at the same time or get a premium for working longer on the assumption that people's needs or life styles, are or should be, the same, day after day, week after week. The concept of work is such that both employees and their products are, or should be, uniform, predictable and definite.

Many of the problems associated with the implementation of Standard Hours within an organization were outlined in the report by Golembiewski et.al. (1974:507) as follows:

> ... Standard times for beginning and ending the work day exposed employees to peak hour traffic and congestion, which were getting worse. Moreover, rather than come in late after oversleeping or tending to personal business, some employees took a full day's sick leave or absence when less time would have sufficed. Finally, apparently the normal schedule encouraged some down time, as when chemical reactions would not be started until the next day because they could not be completed before the normal end of a work day, and because there was no procedure for carrying forward credit for such extended work.

Thus for writers such as Elbing et.al. (1974) and Golembiewski et.al. (1974) flexible working hours offer many advantages for an organization.

Alternatively, the development of interest in other innovations in the management of time such as the compressed work week can be found in the following industrial statistics. An examination of industrial trends in Canada reveals that even though there are only a small number of firms operating on a compressed work week, the number of firms has been steadily increasing. For example a study by Harrison et.al. (1971) found that of 152 Canadian companies surveyed only 17 had implemented a compressed work week. One year later, Harrison (1972) found 76 firms out of 184 surveyed had adopted a compressed work week.

In addition Hameed (1973) noted that a Federal Government survey had listed 233 Canadian plants operating a compressed work week.

(c) The Evaluation Stage

At the evaluation stage the individual mentally applies the innovation to his present and anticipated future situation and then decides whether or not to try it.

Many claims have been made concerning the cost-benefits associated with the adoption of various innovations in the management of time, and these would be considered for a specific organization at this evaluation stage.

Compressed Work Week - Cost/Benefit Analysis

Many researchers such as Hellreigel (1972), Hameed (1973), Swimmer (1973) and Paul (1972; 1970) have discussed numerous cost- benefits accuring from the implementation of a compressed work week, and a summary of their major findings is presented below.

Benefits Associated with the Compressed Work Week

(1) Reduced Employee Turnover. A study conducted by Harrison et.al. (1972) notes a decrease in personnel turnover in 14.6% of the organizations that had adopted the compressed work week, an increase in turnover 1.3% and no change 80.5% (and 3% were reported too early to assess). However in another study conducted in two ammunition manufacturing companies in Idaho by Henderson (1973) no change in turnover was reported. Finally, reduced turnover was reported as an advantage in some of the Ontario Government Study (1972) and in the Dominion Loose Leaf Company (1972). No information was available for educational organizations although this information could be collected to support or refute these industrial findings.

(2) Improved Worker Morale. A study by Harrison (1972) cited that in 81 percent of the organizaticns studies worker morale improved. Similar results were found by the Ontario Government Study (1972), and the Dominion Loose Leaf Company Study (1972). Again, in educational organizations as yet no studies have reported trends in worker morale, although in Minnesota (1975) students were reported to be extremely satisfied with this arrangement.

(3) More Intensive Use of Capital Equipment. Poor (1971) noted that the compressed work week has long been used by a number of oil companies in their delivery division, and they have reported better use of trucks, more deliveries and/or miles per day. Within educational organizations, because of the large investment in capital equipment it is also feasible that extended hours (4/40) of operation would also result in more efficient use of school facilities, and lower operational costs.

(4) Decreased Absenteeism. It could be argued that the introduction of a compressed work week has inherent advantages in reducing absenteeism, for example, one day absent in a 5/40 work week, represents 20% of the total weekly work time, whereas one day absent in a 4/40 work week represents 25% of the work time. Thus in the latter case the increased amount of income that may be lost could be a deterrent to absenteeism. In Harrison's study (1972) examining 184 industries operating a compressed work week he reported a decrease in absenteeism in 50% of these companies. The Ontario Study (1972) also reported decreased absenteeism as a result of this innovation in the management of time. Furthermore in the Edmonton City project (1972), it was reported that absenteeism due to sickness decreased after one year of trial. Again no specific data is available for educational organizations to refute or support this

trend. It should be noted that in other studies such as in the Winnipeg Imperial Oil Enterprises Refinery, (1973) sickness record was unaffected.

(5) Increased Productivity and Earning. There is a considerable lack of consensus regarding the productivity and income benefits that accrue from a compressed work week approach. The Harrison (1972) study cites increased earning and productivity for 21 firms (8.3%) of the sample studies, but no specific details were given relating to the nature of these productivity increases. No information was available from school organizatons such as changes in pupil retention rates, or pass rates to gain any indication of possible changes in productivity.

(6) Increased Consumption Expenditure. Poor (1973:231) noted that about one third of the workers in studies she has conducted do report spending more money on long weekends. However these changes in the level and pattern of consumption expenditure are perceived as a benefit to them because of the value and satisfaction gained from this extended leisure time. Also this increased expenditure contributes to economic stimulation.

Thus, overall in the small number of studies reported above, the major benefits accruing from the introduction of a compressed work week in industry appear to be improved morale, decreased absenteeism and labor turnover, more efficient use of capital equipment, and increases in productivity and income. Because of the limited number of studies in organizations that are operating upon a compressed work week basis, these perceived benefits are not to be regarded as conclusive, and there is need for further research in industry, and especially in education.

Costs Associated With a Compressed Work Week

Secondly, an examination of the literature revealed the following costs to be associated with the introduction of a compressed work week.

(1) Moonlighting. One of the most controversial issues concerning the introduction of a compressed/reduced work week involves the impact on the labor supply in general and the problem of multiple job holding. Some of the literature on a shorter work week suggests that there is a high probability of multiple job holding adding to increased worker fatigue.

Tandan (1973;53) commenting on the criticism levied by some economists when discussing compressed/reduced work weeks noted:

> The fears expressed at that time [depression] were the same as are being voiced now, in relation to the 4 day week, namely (1) A reduction in work week (now a switch to 4 day week) will lead to greater moonlighting by the

> worker the worker wants more income and (b) he does not know what to do with the extra time available. (11) Moonlighting will cause fatigue and adversely affect the workers health thereby increasing absenteeism and reducing productivity at the principal job.

To examine the validity of these economists criticisms, the issues of multiple job holding and worker fatigue and its relation to the introduction of a compressed/reduced work week, two sources of information are available: (1) Tandan (1972:51-64) has employed indifference curve analysis to determine if changes in the allocation of time would lead to multiple job holdings; (2) the results of empirical studies conducted in industry can be examined to test the validity of these theoretical predictions.

Indifference curve analysis. Tandan (1973) presented the following indifference curve approach to attempt to predict the effects of a compressed work week upon multiple job holding or "moonlighting".

Assumptions. In the following analysis three assumptions underly the utilization of this indifference curve approach to predict the effects on multiple job holding. They are:

(1) Income and leisure are both normal economic goods i.e. the worker will be better off with more income and/or increased leisure. Thus this analytic approach does

not apply to a person with a negative marginal utility for leisure.

(2) The worker is fully employed on his present job i.e. he does not wish to work more or less than the existing organizational arrangements for work permit him tc.

(3) For any increase in wage, the income effect for leisure dominates, i.e. the worker is in the backward sloping region of his labor supply curve). Thus this approach would not apply to low wage workers whose needs for greater earning exceed their desire for more leisure.

Two cases will be briefly examined in this analysis. In the first case there will be a compressed work week with no reduction in hours 4/40. In the second case a reduction in hours will be included, 4/32.

Situation I, 4/40. In the Figure 5 presented below time and income are represented on the X and Y axis respectively. with OA and OB representing the maximum leisure and income that the worker can achieve. AP represents the time devoted to essential non-market activities (NM) such as commuting. In the position of initial equilibrium So, the individual works for LoA units of time, OLo units of leisure, and OYo units of income.

Now, with the introduction of a 4/40 compressed work week, the individuals' non-market time spent commuting will

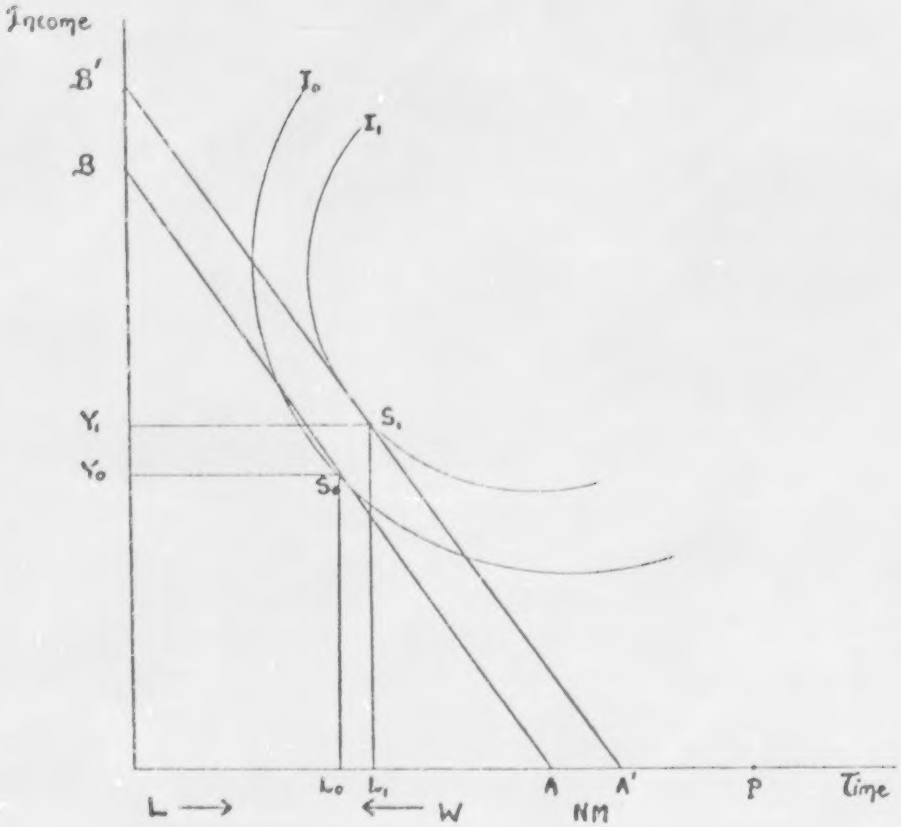

Income
B'
B
I₀
I₁
Y₁
Y₀
S₁
S₀
L₀
L₁
A
A'
P
Time
L ⟶
⟵ W
NM

Figure 5

Indifference Curve Analysis for 4/40

Compressed Work Week

be reduced by say AA^1. He can now devote this extra time to more leisure and/or more income, and this is reflected by the shift in his budget time to A^1B^1. Thus the worker ends up at a new equilibrium point S^1 where he has L^0L^1 of additional leisure and Y^0Y^1 of additional income.

Thus it is found that the worker will supply more labor, if a 4/40 work week is introduced. However, the actual amount of additional labor is small because AP itself is small (non market activity - commuting time).

Situation II, 4/32. In this case a reduction in hours without any corresponding decline in income, results in a higher wage rate as seen by the pivoting movement from AB to AB' in Figure 6 below.

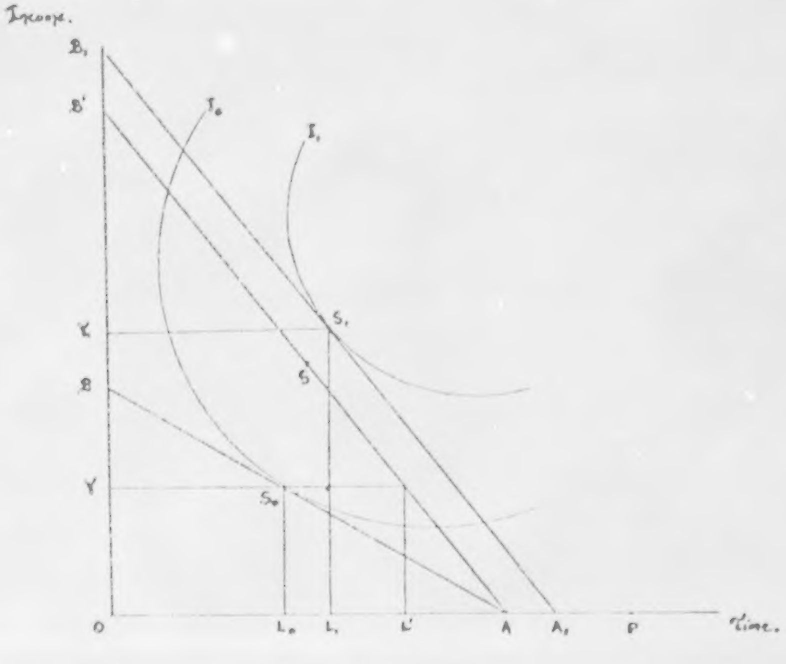


Figure 6

Indifference Curve Analysis for 4/32 Compressed Work Week

The immediate effect of this pivoting of the budget line is to indicate a new equilibrium position at S', where the worker would desire more income and more leisure. Furthermore, the saving in non-market time as a result of less commuting would cause the budget line to move to the right to A1B1. Thus a new final equilibrium is established at S1 where the worker seeks OL1 units of leisure, L1A1 units of work and OY units of income. Therefore a reduction in hours of work, say 4/32 shall lead the worker to seek additional work. How much additional work effort he is willing to supply depends on the difference between his additional demand for leisure and his additional desire for work (A - A1). Also if he now desires additional work he still has to find a second job that is acceptable to him. i.e. wage rate has to be such that he will substitute work for leisure.

Empirical Studies on Moonlighting. Secondly, Tandan (1973: 59-61) reports on a number of studies that have been conducted in Canada to examine the impact of a compressed/reduced work week on demand for an additional job. Tandan (1973) reports that in one study conducted by Oil, Chemical and Atomic workers International Union 1800 employees were asked about their moonlighting experiences. Only 6 pecent of employees had a part-time job. This increased to 8 percent when asked would they seek a part time job if they got more time off from their regular job. A futher study conducted by Paul (1973) found that only 8 percent of the group studies hold additional jobs. Henderson (1973) reported a figure of 10% of respondents were in search of a second job, and one half of these indicated that it was directly due to the fact that they were working only four days. Within education systems, the potential to undertake employment on the fifth day may be an important asset to students who are trying to cope with the "myth of free education." Many students already undertake part-time jobs that interfere with their studies, and this could enable them to make more suitable work arrangements. The extent to which teachers would desire to "moonlight" needs to be investigated because as yet no detailed information is available.

(2) Fatigue. It is important to note that in the Ontario study (1972) of the six organizations that discontinued the compressed workweek, three did so because employees complained of the workday length. (4/40). This problem may not be as critical in educational organizatons as the experiment in Stillwater, Minnesota (1975) has only extended the school day by one hour to 7 1/2 hours. Students attend classes on their four days from 7:50 a.m. to 3:50 p.m. with a half hour for lunch. This is necessary to meet the state's requirments of 1050 hours per schcol year. If this innovation in the management of time could be proven to produce excessive fatigue amongst students and/or teachers

in the learning process, then it may be necessary to further investigate the potential for greater reduction in school hours.

(3) Trade Union Opposion. This is an important cost as most trade unions will not support a 4/40 compressed work week because they consider it a retrograde step towards back to longer work hours. However the trade union movement will support a 4/32 work week, and thus it is perhaps less noticeable if educational organizaton moved in this direction, than many industries because many schools now operate almost on approximatey a 5/34 basis. But again, public support is necessary before such a reduction in hours can be implemented.

(4) Interface with industry and customer service. The extent to which an industry can adjust to re-organized time schedules would depend to a large extent on the competitive strength of that industry and the impact that such re-organization has on its absolute and comparative advantage in domestic and/or international markets.

Also interface with other firms or clients, especially in areas such as shipping, receiving and sales has to be overcome in both of these markets. Thus the extent to which customers, or clients, demands can be satisfied in a manner that is at least as effective as in the past may severely limit the implementation of a compressed work week operation.

(5) Problematic for Female Workers. Since WWII female participation rates in the workforce have continually increased in Canada. Carmel (1973:189) noted that the number of females in the Canadian Labor force has grown from 238,000 in 1901 to 2,831,000 in 1971 which has been a much faster rate of increase than that of female population of working age. During this same period of time, the female participation rate in the workforce has risen from 12.0 percent to 36.5 percent, with the greatest increase occurring in the post-1955 period.

During the 1970's advocates for the improved status of women in our society are demanding changes that will lead to even greater female participation rates in the future. Carmel (1973:189) emphasizes that the changing length and structure of the work week has been one of the important factors underlying the steady increase in female participation rates, and further restructuring of the work week has been advocated as one way to facilitate the equality of sex roles in our society.

However Carmel (1973:193) noted that in surveys conducted in industry where a compressed work week (and extended workdays) had been adopted, the one group that has been consistently least satisfied has been married women, with young children at home.

These mothers of young children find that their long work day extends beyond the time span of most childcare facilities, and that alternative arrangements for child care have to be made for this discrepant period of their working day. In addition this extended work day often requires that the women leave home early in the morning before their children leave for school, which means that the children must get up and get ready excessively early. Alternatively, this extended work day may keep the women at work later than the normal work day, which creates problems with after school care and the prepartion of evening meals. Also family conflicts with husbands who are on a five day work week have been expressed by this group of women, to be a function of a compressed work week.

Perhaps, some of the experiments in parts of Europe could provide insights into the resolution of many of the social problems related to a compressed work week, and female participation in the workforce. For example, in Norway, the government is experimenting with the ending of sexual stereotypes, by having a couple share a single job, with the husband and wife working alternate weeks.

Summary

This discussion of cost/benefits is not intended to be exhaustive as other benefits such as improved personnel selection, space utilization, and costs such as increased tardiness, resentment could also be discussed. However the above discussion does serve to illustrate that many claims in industry have been made outlining various benefits and costs arising from the introduction of compressed work week. On the other hand even though some school districts and government education departments have implemented a compressed work week schedule, as yet no comprehensive research has been undertaken to examine the positive and negative pay-off for educational organizations.

Alternatively, if organizational members were concerned with the Evaluation Stage for cost/benefits associated with the introduction of flextime, some of the following factors would warrant consideration for any participant organization.

Flextime - Cost/Benefit Analysis

Many researchers such as Golembiewski (1974), Hilgert and Hundley (1975), Marks (1974) Elbing et al (1974) Swart (1974) and Werther (1973) have discussed numerous cost- benefits rising from the implementation of flextime and a summary of their major findings is presented below.

Benefits Associated with Flextime

(1) Reduction in Lost Working Hours. Golembiewski (1974:510) stated:

> Although the flexible work-hour system does not explicitly provide for more work hours, it may minimize lost work hours. For example, in organizations with fixed working hours, employees frequently take time off for personal business, formally or informally. Under flexible work hours, time off for personal business is legitimate, but employees tend to take care of personal business on their own time.

(2) Reduction in Overtime. Overtime may be reduced since some experiences indicate that flexible hours allow any adjustments to variable work loads. Swart (1974:26) emphasized that there may be less need for overtime and overtime work since hours worked are more flexible.

(3) Reduced Absenteeism. Swart (1974:26) emphasized a redution in absenteeism since employees can take care of personal business without using sick leave time or other paid company time - and still put in a full work day. Golembiewski (1974:510) also noted that sick time may be reduced. For example, individuals who oversleep can legitimately come to work, as opposed to calling in sick to avoid being recorded as late.

(4) Increased Productivity. Golembiewski (1974:510) noted, "Flexible hours may provide quieter periods permitting more concentrated work and thought ... " Productivity may increase, although this can only be measured by changes in attitudes about productivity. Some evidence indicates that employees on flexible hours are more

inclined to stop work only after a task has been completed, thereby reducing start-up time on the following day and avoiding down-time at the end of the work-day. Moreover, flexible work hours permit an employee to plan his work hours to coincide more closely with his most productive hours as in the cases of early or late "starters". Therefore, the hours an employee works may be more productive in terms of quality and quantity.

Similarly, Swart (1974:26) commented that there is more likelihood that the employee will leave work at a logical "stopping point" rather than slow down as the end of a typical working day approaches."

(5) Improved Organizational Climate. Swart (1974:26) commented that the introduction of a more healthy organizational climate in which employees are more receptive to changes in organizational practices and procedures.

(6) Improved Job Satisfaction. Swart (1974:26) commented that flextime encourages 'greater freedom autonomy, and recognition of individual differences among employees'.

Furthermore Swart (1974:26) stated flextime contributes towards:

> "Greater participation in decision making and the spread of democracy in a work force, as non-managerial employees

> join the ranks of those managers having rights to flexible working hours."
>
> A reduction in employee fatigue as a worker adjusts his working to fit off job interests and responsibilities.

In addition Golembiewski (1974:510) noted: "Flexible hours may provide a better work climate for employees, thereby resulting in improved morale ... "

(7) Facilitates Effective Conduct of Family Responsibilities. Swart (1974:26) noted that flextime is an excellent vehicle for the recruitment and maintainance of female employees because of the time advantage for unmarried career women and married women desiring to work who have family responsibilities at home.

Elbing et al (1974:29) stated:

> "If both husband and wife work, flexible working hours make it possible for them to arrange their schedules so that one of them can for instance be at home when the children get out of school."

(8) Reduction in Traffic Congestion and Saving in Commuting Time. Marks (1974:5) noted that the first experiments with flexible hours occured in West Germany in the 1960's as a measure to alleviate traffic congestion. This was also an important factor underlying the implementation of flextime in various Federal Government Departments in Ottawa in the 1970's. Thus the arrival and

departure times of employees were spread over the flextime periods rather than concentrated upon one starting and finishing time for most organizational participants. Also the potential for greater use of public transport facilities may contribute to decreased air pollution.

(9) More Effective Use of Leisure Time. Swartz (1974:26) noted that flextime may contribute to:

"Harmony with that off the job cultural trend which provides for greater freedom of choice and discretion concerning use of time and pursuit of interests.

Furthermore, Elbing et. al (1974:28) noted:

> "For the community, flexible working hours can lead to a more uniform use of recreational and support facilities. With spread out work peaks it is possible to ensure better use of golf courses, power and fuel supplies, traffic routes and even human patience."

(10) More Effective Use of Corporate Facilities. Werther (1973:78) noted that with the introduction of flextime:

> "Corporate facilities such as parking lots, cafeterias and locker rooms are less congested as are public roads adjacent to the office building or plant."

Costs Associated with Flexible Working Hours

Secondly, an examination of the literature evaluated the following costs to be associated with the introduction of flexible working hours.

(1) Communications Problems May Arise. Golembiewski (1974:511) noted that:

> Because core hours cover only five hours a day, informal communications such as spontaneous meetings and phone calls, might be impaired.

(2) Negative Effects of Time Keeping Devices. Swart (1974:25) noted that there may be additional physical equipment purchases and costs associated with the implementation of time recording systems. For example, the Hengstler Time Keeping Device is commonly used in Europe where flextime is operationalized.

In addition the psychological impacts of time keeping devices are emphasized by Golembiewski (1974:511) who stated that the positive affects of flexible hours may be diminished by the negative effects of requiring the use of a time chart.

(3) Perceived Threat to Management Control. Elbing (1974:28) commented:

> "Perceiving pressure from top management as a demand to 'control' subordinates, supervisors often take refuge in one of the oldest organizational myths --

> presence equals performace. When all else fails, they can take comfort from insisting on attendance and punctuality. Under flexible working hours first line supervisors are deprived of recourse to this time honored tool, and are asked instead to trust their subordiates before they acquire the reassuring experience that the subordinates will honor the trust."

Similarly Golembiewski (1974:511) noted that the increased flexibility that employees have over their time allocation may be perceived by some managers as a threat to their control.

Furthermore Golembiewski (2974:511) stated that "The flexible work schedule may require increased supervisory time and may divert supervisors from more important tasks."

Similarly Swart (2974:25) noted, "Supervisors may lose some control over subordinates who arrive early or stay later than their superiors ... [and] confusion may be generated in firms operating two or more shifts."

(4) Differences May Arise in Work Schedules. Swart (1974:25) emphasized that, "In very large and complex organizations, attempts to plan, organize and control work within a flextime framework may prove to be cumbersome and costly."

To illustrate the complexity of this problem further Werther (2973:82) noted:

> The extent of flexibility is related to the degree of interdependance among jobs; highly antonomous positions such as clerk typist, janitor, bookkeeper, and others can utilize more flexible schedules. Production workers, bank tellers and those who are in teams or must meet peak customer demands can take advantage of only limited flexibility.

(5) Resistance to Standard Hours Systems. Golembiewski (1974:511) suggested that once employees have experienced flexible working hours, many would be reluctant to return to a standard home system.

(6) Problems in the Provision of Service to the Public. Swart (1974:25) outlined a number of problems that may effect the provision of service to the public if flextime is adopted within an organization.

> "Particular workers may not be available during certain hours outside of core time ...[and], although flextime reduces distinctions among white collar workers, many service employees and blue collar workers in production jobs may be excluded from the plan.

(7) Increases in Operational Costs. Swart (1974:25) outlined that employees performing work functions over a greater span of hours may produce additional costs associated with energy and physical plant requirements.

Additional costs such as Hengslter time keeping devices have been discussed previously. In addition it is necessary to calculate total hours worked over a selected period of time. If some form of time bank is incorporated into a flextime model it is also necessary to calculate weekly banks of hours worked. Calculating recording this data on an ongoing basis, the credit or deficit hours worked, involves time and cost on the part of the employees.

Summary

Despite these potential limitations Elbing et.al. (1974) emphasize the growing interest in flexible working hours across North America, and their extensive introduction across Europe. The study undertaken by Golembiewski (1974) supported most of the advantages outlined above for flextime, but much more research is needed in this area to confirm these findings.

(d) The Trial Stage

During the trial stage the innovation is used on a small scale to determine its utility in the relevant situation. Rogers (1962:84) stated that:

> "The main function of the trial step is to demonstrate the new idea in the individuals new situation and determine its usefullness for possible complete own option. It is thus a validity test or "dry run"; ..."

Because there innovations in the management of time have only recently been introduced into North American organizations, as yet few evaluation models or strategies have been developed to measure the organizational changes resulting from alternations in the workweek.

However Hellreigel (1972) presented a model for the evaluation of a compressed work week, as illustrated in Figure 7. Basically Hellreigel presents a three step evaluation approach applicable to an organization considering the adoption of a compressed work week. The first stage involves an examination of the effects of a compressed work week upon the nature of the organizations processes (unit, batch or continuous). The utilization of capital and resources, customer response, competence consequences, legal implications and union opposition. If the results of the first steps are favorable, then stage two involves evaluating conditions relating to the employees. Hellreigel emphasizes communication between administration and non-administration personnel to examine issues such as changes in the hours of work, remuneration, fatigue and boredom. Also it is necessary to discuss issues exogeneous to the organization such as transportation effects, effects upon family life and use of leisure time.

With open communication Hellriegel suggests that in stage three, worker attitudes to the plan could then be investigated concerning the proposed adoption of the plan, and their feelings about job satisfaction and morale.

If all three steps are positive from the benefits

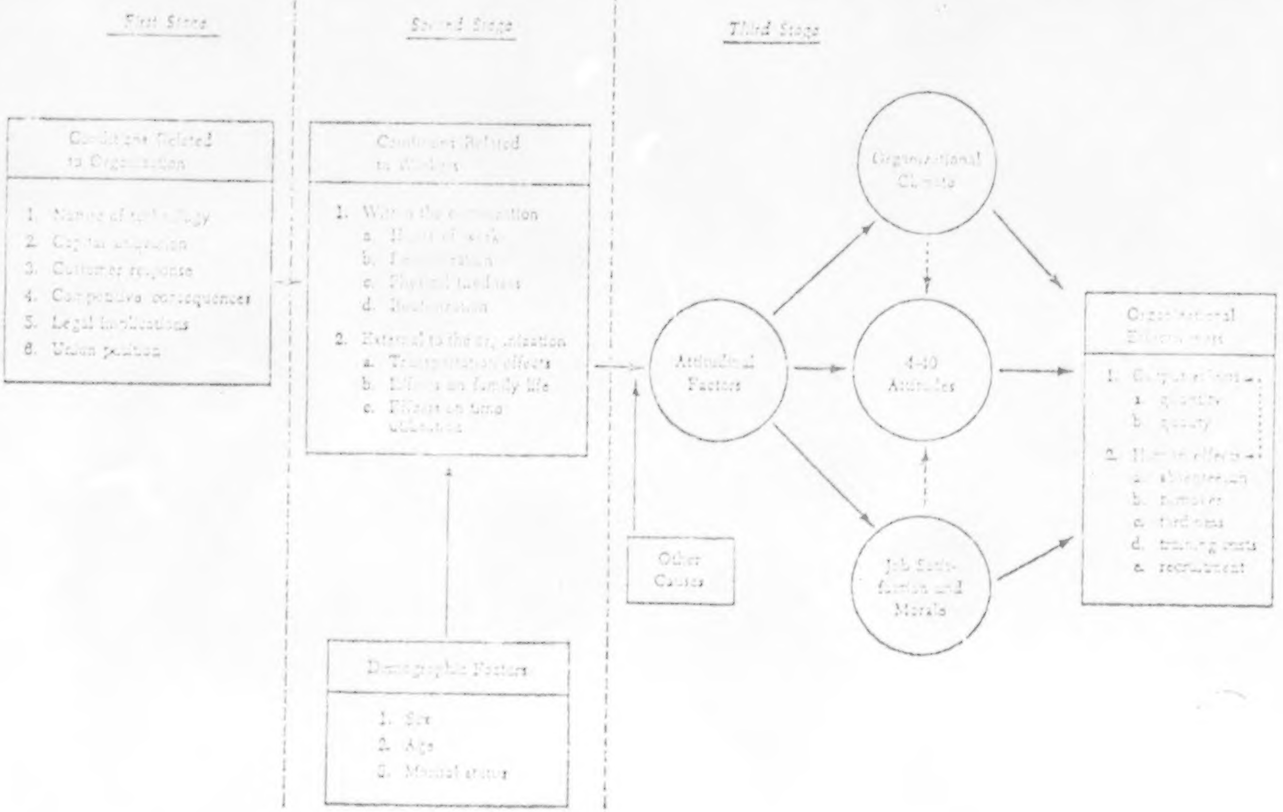

First Stage
Second Stage
Third Stage
Conditions Related to Organization
1. Nature of technology
2. Capital acquisition
3. Customer response
4. Competitive consequences
5. Legal implications
6. Union position
Conditions Related to Workers
1. Within the organization
a. Hours of work
c. Physical tiredness
2. External to the organization
a. Transportation effects
b. Effects on family life
c. Effects on time utilization
Demographic Factors
1. Sex
2. Age
3. Marital status
Other Causes
Attitudinal Factors
Organizational Climate
4-40 Attitudes
Job Satisfaction and Morale
Organizational Effectiveness
1. Output effects
a. quantity
b. quality
2. Human effects
a. absenteeism
b. turnover
c. tardiness
d. training costs
e. recruitment

FIGURE 7

MODEL FOR EVALUATION OF THE 4-40 PLAN

associated with the compressed work week may be more likely realized. But further re-evaluation is essential as necessary to see if the expected outcomes are achieved.

(e) The Adoption Stage

Rogers (1962:86) noted that:

> At the adoption stage the individual decides to continue the full use of the innovation. The main function of the adoption stage are consideration of the trial results and the decision to ratify the sustained use of the innovation.

Within North America many organizations are still involved in the Trial Stage concerning the implementation of innovations in the management of time. However in Europe, many of the innovations have been implemented since the mid 1960's flextime has continued for almost a decade in West Germany.

Marks (1974:6) commented:

> "The concept of flexible hours has gradually expanded to other countries in Europe and similar experiments have been made in Switzerland, France, Belgium, the Netherlands, Sweden, Denmark, Norway, Finland and Spain. The experiments are generally regarded as positive."

The findings of this study should also provide additional information for a data bank concerning the impact upon educational organizations in Canada arising from alterations in the work week and hence data on which adoption decisions may be derived.

It is interesting to note the various levels within an educational system where the decision has been affirmative towards the experimentation with some form of restructured work week.

First, at the school level, within educational systems some schools have also experimented with compressed work week approach. For example in the United States in Unity, Maine and in Stillwater, Minnesota school districts have adopted a compressed work week for students. Teachers attend on the extra day for professional development meetings and for preparation of lesson materials etc. Also in Alberta, R.J. Scott Elementary school and Archbishop Jordan High school have adopted a compressed work week for students. Also other schools in Alberta such as J.P. Wagner have considered proposals for the adoption of a compressed work week.

Secondly at the administrative level when the Alberta Department of Education one branch is experimenting with a compressed work week system, whereas ten other branches are experimenting with flextime allocations for working hours. It is important to note that some of these innovations have had much greater utilization outside of North America.

CHAPTER SUMMARY

In this chapter I have attempted to outline how the trends in standard, actual and paid for hours of work are providing an impetus for a reconsideration of the 5/40 work week as an acceptable model for the allocation of time in a work situation. Furthermore during the 1960's and 1970's many alternative models for the managmement of time have been developed, and various claims relating to the cost/benefits of these models have been made from limited industrial experience and research.

Rogers Adoption Theory model provided the framework for a detailed analysis of some of the cost/benefit claims on organizational impacts associated with various innovations in the management of time.

Because of the limited amount of research literature available from studies related to innovations in the management of time in government and educational organizatons, this literature review was designed to emphasize some of the areas that could be investigated if studies of this nature were undertaken.

Finally, it should be notd that during the recent recession 1973-76, because of the high unemployment and inflation problems, industrial attention has focused away from innovations in the management of time. On the basis of the trend in the period 1975-76, one could speculate that once the upswing in the trade cycle is firmly established, attention may again be focused upon increased leisure and changes in organizational time structures. Furthermore, if wage and price controls persist in the forseeable future, workers may demand increased leisure as "payment" for increases in productivity, assuming that other fringe benefits are reaching saturation point.

This viewpoint is well illustrated by Max Kaplan, Director of the University of Southern Florida's Leisure Studies Program (1973:39) who stated:

> The normal extension of automation has reduced work hours roughly from 70 to 37 in the past century, or almost 4 hours per week by the decade; thus an additional reduction of 12 hours by 2000 A.D. ... is now intensified by computerization so that the new time off weekly could be 5 hours in the '70's, 6 in the 80's, 7 in the '90's. The result could be a work week of 20 hours at the century's end.

CHAPTER 3

RESEARCH DESIGN AND DESCRIPTION OF THE SAMPLE

First, the importance of the study is outlined in this chapter. This is followed by a discussion of the methods used to select the sample of respondents used to provide data for the instrumentation employed in this study.

Thirdly, reference is made to the pilot tests conducted to improve the validity of the instrumentation. Fourthy, a brief reference is made to the statistical techniques used in analysing the data.

Finally, this chapter is concluded with the presentation of a profile of the characteristics of the respondents that were selected in the stratified random sample developed for this study.

IMPORTANCE OF THE STUDY

As stated in Chapter 2 interest in innovations in the management of time have spread from small businesses to large government departments and multinational corporations. Because many of these innovations such as a compressed work week or flexible working hours have only been introduced in the early 1970's in many of these organizations, as yet little information is available concerning the nature of the changes in organizational operations that have been associated with these innovations.

This study is undertaken with the assistance of the Alberta Department of Education to examine the impacts upon organizational operations arising from the introduction of these innovations into various branches of this government department.

Organizational Structure -- Alberta Department of Education

This study focuses upon the relationship between innovations in the management of time and organizational change within the various branches of the Alberta Department of Education.

In Figure 8 an organization chart outlining the various branches within the Alberta Department of Education is presented. In Appendix A an accompanying statement of functions associated with the various positions in this organization chart is shown.

More specifically, within the organizational structure of the Alberta Department of Education the following branches can be identified, as incorporating various structures of working hours.

Group 1 - Flexible Working Hours

a. Special Education, Guidance and Counselling, Special Educational Services.

b. Registrar's office.

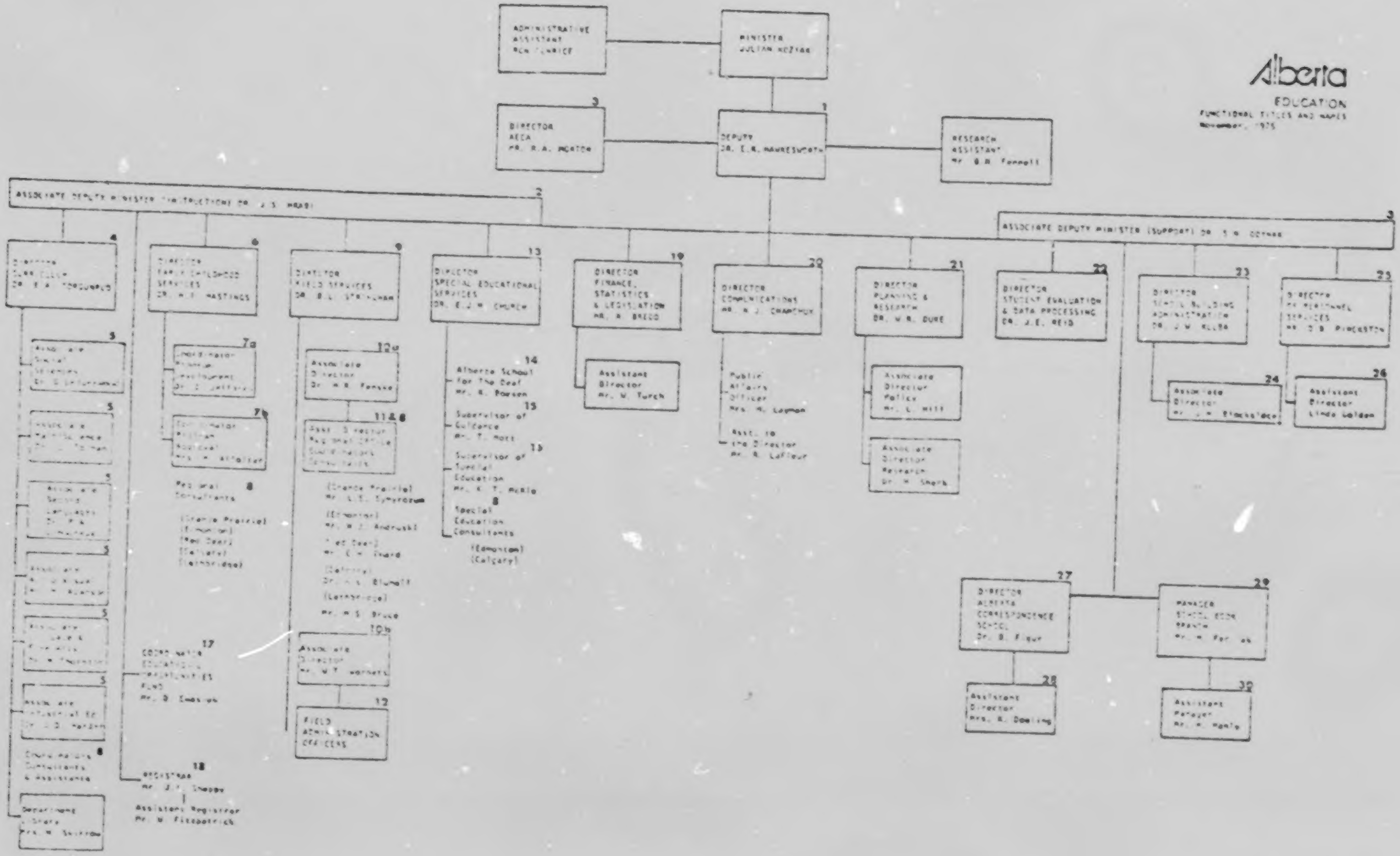

Alberta
EDUCATION
FUNCTIONAL TITLES AND NAMES
November, 1975
ADMINISTRATIVE ASSISTANT
MINISTER JULIAN KOZIAK
1
DEPUTY DR. E.K. HAWKESWORTH
3
DIRECTOR AECA MR. R.A. MORTON
RESEARCH ASSISTANT Mr. B.R. Fennell
2
ASSOCIATE DEPUTY MINISTER (INSTRUCTION) DR.
3
ASSOCIATE DEPUTY MINISTER (SUPPORT) DR.
4
DIRECTOR CURRICULUM
6
DIRECTOR EARLY CHILDHOOD SERVICES DR. HASTINGS
9
DIRECTOR FIELD SERVICES
13
DIRECTOR SPECIAL EDUCATIONAL SERVICES DR. E.J.M. CHURCH
19
DIRECTOR FINANCE, STATISTICS & LEGISLATION MR. R. BRECO
20
DIRECTOR COMMUNICATIONS
21
DIRECTOR PLANNING & RESEARCH DR. W.R. DUKE
22
DIRECTOR STUDENT EVALUATION & DATA PROCESSING DR. J.E. REID
23
DIRECTOR SCHOOL BUILDING ADMINISTRATION
25
DIRECTOR OF PERSONNEL SERVICES
5
Associate Social Sciences
5
5
Associate Second Languages
5
5
5
Associate Industrial Ed
8
Consultants & Assistants
Department Library
7a
Coordinator Program Development
7b
Regional Consultants
8
(Grande Prairie)
(Edmonton)
(Red Deer)
(Calgary)
(Lethbridge)
17
FUND
18
REGISTRAR
Assistant Registrar Mr. W. Fitzpatrick
10a
Associate Director
11 & 8
Regional Office Consultants
(Grande Prairie)
(Edmonton)
Mr. W.J. Andruski
(Red Deer)
(Calgary)
(Lethbridge)
Mr. W.S. Bruce
10b
Associate Director
12
FIELD ADMINISTRATION OFFICERS
14
Alberta School for The Deaf Mr. R. Powsen
15
Supervisor of Guidance Mr. T. Mott
15
Supervisor of Special Education
8
Special Education Consultants
(Edmonton)
(Calgary)
Assistant Director Mr. W. Turch
Public Affairs Officer Mrs. M. Layman
Asst. to the Director Mr. R. LaFleur
Associate Director Policy Mr. L. Hill
Associate Director Research Dr. H. Sherk
24
Associate Director
26
Assistant Director Linda Golden
27
DIRECTOR ALBERTA CORRESPONDENCE SCHOOL
28
Assistant Director Mrs. R. Dowling
29
MANAGER SCHOOL BOOK BRANCH
30
Assistant Manager

Figure 8

Organization Chart for Alberta Government Department of Education

c. Student Evaluation Data Processing, Testing and Development.

d. Alberta Correspondence School.

e. Early Childhood Services.

f. Curriculum.

g. Audio Visual Branch.

h. Communications Branch.

i. Personnel Services Branch.

Group 2 Compressed Work Week

a. Finance, Statistics and Legislation.

Group 3 Standard Hours

a. School Book Branch

b. Alberta Education Communication Authority

c. Educational Opportunities Fund

d. Field Services

e. Planning and Research

f. School Building

g. Deputy Ministers office

h. Ministers office

Sources of Data

For the purpose of this study on organizational change and effects of alterations in the work week, data was obtained from three major sources.

1. Questionnaire Data
2. Interview Data

3. Operational cost data - obtained from an examination of some government records, budgets and statements on expenditure.

SELECTION OF THE SAMPLE

Within these branches previously outlined for reasons of economy and effort[1] it was decided to obtain a stratified random sample of respondents from within the branches that were able to participate in this study.

Plutchik (1968:75) stated:

> "The advantage of stratifying a population before taking the sample is that the chances of picking a very deviant sample are less and estimates of population values are therefore more precise than would be the case with a simple random sample of the whole population. The major limitation of stratified random sampling is that it requires advance knowledg of the strata within the population

For the purpose of this study two strata were identified as providing an important basis for the selection of the sample

(1). It was important that data should be obtained from all branches that were able to participate in the study.

---

[1] It should be noted that it was not possible to gain data from the total population within the Alberta Department of Education because the Alberta School for the Deaf was not able to be included in this study.

(2). Within the branches that were able to participate in the study, it was important to gain opinions from both administrative and non-administrative personnel.

1. Selection of the Stratified Random Sample of Respondents used for Questionnaire Data

In Tables 3, 4 and 5 the details of the selection of the stratified random sample are presented.

First, within the three identified populations a stratified random sample of approximately 85 percent of all respondents were selected for the study. A computerized personnel listing for the month of September 1976 was obtained for each branch. A table of random numbers was applied to his listing to derive the stratified random sample.

It is important to note that the personnel listing for September 1976 was selected for this study for the following reason. Data was not gathered until October and therefore all respondents selected in the sample would have had at least one to two months experience in the branch before responding to this instrumentation.

Standard Hours Group With this group the population consisted of 98 management personnel and 105 non-management

Table 3

Selection of Stratified Random Sample for Questionnaire Respondents - Standard Hours Group[a]

Branch	Population[b] Filled M	Positions NM	Total N	Random Sample M	NM	Questionnaires Total Returns	Useable Returns	Percentage of Sample
School Book Branch	1	44	45	1	36	30	30	22.9
Alberta Education Communication Authority	2	1	3	2	1	3	3	2.3
Educational Opportunities Fund	2	1	3	2	1	3	3	2.3
Field Services	77	40	117	62	32	71	70	52.7
Planning & Research	7	4	11	5	3	8	8	6.1
School Buildings	3	11	14	2	8	10	10	7.6
Deputy Minister's Office	4	2	6	3	2	5	5	3.8
Minister's Office	2	2	4	2	2	3	3	2.3
N	98	105	203	79	85	133	132	100.00

a Alberta School for the Deaf did not partake in this study.

b Personnel listing as of September 1, 1976 used to select sample.

Table 4

Selection of Stratified Random Sample for Questionnaire Respondents - Flextime Group

	Population			Random Sample		Questionnaires		
Branch	Filled M	Positions NM	Total N	M	NM	Total Returns	Useable Returns	Percentage of Sample
Personnel Services	2	5	7	2	5	7	7	3.1
Special Education	8	5	13	6	4			
Special Education Services a	1	3	4	1	3			
Guidance & Counselling	1	2	3	1	2	8	8	3.5
Early Childhood Services	12	6	18	9	4	12	12	5.3
Alberta Correspondence School	4	146	150	3	120	98	98	43.4
Curriculum	10	14	24	8	12	17	17	7.5
Audio Visual Services b	-	28	28	-	22	14	14	6.2
Communications	2	4	6	2	4	6	6	2.7
Testing & Development	-	10	10	-	8	8	8	3.5
Student Evaluation and Data Processing c	4	53	57	3	41	44	44	19.5
Registrar's office	2	10	12	2	10	8	8	5.3
N	46	286	332	37	235	226	226	100.00

a All divisions of the Special Education Branch.
b All divisions of the Curriculum Branch.
c All divisions of Student Evaluation Branch.

Table 5

Selection of Stratified Random Sample for Questionnaire Respondents - Compressed Work Week Group

	Population			Random Sample		Questionnaires		
Branch	Filled M	Positions NM	Total N	M	NM	Total Returns	Useable Returns	Percentage of Sample
Finance, Statistics and Legislation	6	45	51	5	36	38	37	100.00

personnel. From this population involving 8 branches of the Alberta Department of Education, a stratified random sample was selected comprising 79 management personnel and 85 non-management personnel. This information is presented in Table 3 where it can be seen that 132 useable questionnaires were returned from this sample.

Flextime Group Table 4 shows that the population consisted of 46 management and 286 non-management personnel. From this population 37 management and 235 non-management personnel were selected in the stratified random sample. Furthermore 226 useable questionnaires were returned from this sample.

Compressed Work Week Group The information contained in Table 5 showed that the population consisted of 6 management and 45 non-management personnel. From this population the stratified random sample derived 5 management and 36 non-management personnel. From this sample 37 useable questionnaires were returned.

2. Selection of Respondents for Interview Sample

Additional data was gathered in this study by conducting a series of interviews with key personnel within the organization. Within the non- management classification experienced personnel were identified with the assistance of the Directors of these various branches.

Flextime Group At each worksite involving some form of flexible working hours in-depth interviews were conducted with both management and non-management personnel. Table 6 showed that a total of 10 management and 14 non-management interviews were conducted at these worksites.

Compressed Work Week Group At the worksite incorporating a compressed work week system interviews were conducted with 2 management and 2 non- management personnel. This information is also presented in Table 6.

Standard Hours Group Within the questionnaires administered to this group, a number of open ended questions were included to gain in-depth opinions concerning attitudes towards the potential adoption of innovations in the management of time. These responses will be compared with the interview data gained from the other two experimental groups.

3. Selection of Respondents for External Perceptions of Service to the Public

In addition to the above mentioned samples of respondents, a further small survey was undertaken to examine the perceptions of clients who have had regular long term contact with the branches involved in these innovations in the management of time. With the assistance of the Directors of these branches a sample of 8 clients were

Table 6

Sample of Respondents Used for Interviews

	Management	Non Management
1. Flextime Group		
(a) Special Education, Guidance & Counselling, Special Education Services	3	3
(b) Registrar's office	1	1
(c) Student Evaluation, Data Processing, Testing and Development	1	2
(d) Alberta Correspondence School	1	3
(e) Early Childhood Services	1	1
(f) Curriculum	1	1
(g) Audio Visual Branch[a]	-	1
(h) Communications	1	1
(i) Personnel Services	1	1
N	10	14
2. Compressed Work Week Group		
(a) Finance, Statistics and Legislation	2	2

---

[a] Administered by Curriculum Branch.

identified within each innovative category and a questionnaire was administered to these groups. From this sample of 16 respondents, 50 percent of the questionnaires were returned.

INSTRUMENT SELECTION AND DEVELOPMENT

Two instruments were employed to gather data to measure respondents perceptions concerning the effects upon the organization associated with alterations in the structuring of the workweek: (1) Hours of Work Questionnaire; (2) Hours of Work Interview Schedule.

(1) Hours of Work Questionnaire

A search of available instrumentation revealed that no one previously validated instrument was available that would be directly suitable for the needs of this study. However, an examination of a number of instruments that had been employed in studies of a similar nature such as Golembiewski (1974), Poor (1973) Ottawa Treasury Board Study (1976), Hellreigel (1972), and Faunce (1963) contributed to the development of a pool of items that would be suitable for use in this study.

However, before these items could be utilized in the questionnaire in this study it was necessary to conduct a pilot study on the suitability of this item pool, in order to validate the instrumentation.

PILOT STUDY AND VALIDATION OF INSTRUMENTATION

(1) Hours of Work Questionnaire

This pilot study focused upon the perceptions of Alberta Provincial Government employees concerning the hours of work arrangements that are currently in operation in their respective departments.

With the assistance of the Director of Personnel Administration for the Alberta Provincial Government it was decided to collect data from the following departments of the Provincial Government for this pilot study.

Pension Board. The Pension Board was chosen because employees in this department had been working on a flexitime program since Decmeber 1973.

Department of Transportation. Secondly, the Department of Transportation was selected because employees in this Department had been working on a compressed work week program since March 1972.

Department of Social Services. Finally, the Department of Social Services was selected as a Standard Hours group. No innovations in the management of time have been introduced in this department as employees still work on a Standard Hours program of time allocation.

Within each of these departments a payroll listing was obtained from The Directors of each department. From these payroll listings a random sample of 45 persons was generated from each department by applying a table of random numbers to this listing.

Data was then gathered from each of these departments, with the co-operation of the respective Directors, and the following figures for useable returns were obtained[2] as outlined in Table 7.

Table 7

Research Sample for Pilot
Study on Instrumentation

Respondents	Number	Useable Returns
Pension Board	45	33
Department of Transportation	45	35
Department of Social Services	45	33

Validation of Instrumentation. The data gathered from this pilot study using the Hours of Work Questionnaire, was examined to test the validity of the instrument.

---

[2] In most cases there were approximately 10 - 12 persons absent or unavailable upon the day data was gathered from each department.

Kerlinger (1967:444) presents a common defintion of validity where the emphasis is on what is being measured. The basic tenet is: Are we measuring what we inteded to measure?

Kerlinger (1967:444-462) discusses a number of types of validity and each of these methods of validation will be discussed in relation with this pilot study.

Face Validity. Garret (1960:355) stated that: "a test is said to have face validity when it appears to measure whatever the author had in mind, namely what he thought he was measuring." Obtaining the judgements and opinions of other interested researchers in this area is very useful in contributing to the face validity of instrumentation. In this instance, the Hours of Work Questionnaire was examined by a panel of researchers from the Department of Planning and Research who provided some useful feedback on the item pool. In addition, the Doctoral Committee supervising this research also examined the instrumentation and provided some helpful suggestions to improve the face validity. For example a number of minor modifications were made to the wording and phraseology used for many of the bank of items used in this study.

Content Validity. Content validity refers to the sampling adequacy of the relevant content of a measuring instrument. As menticned earlier this instruments was developed from a wide variety of instruemnts that have been employed to gather datain studies in related areas. Thus the content and face validity has been reasonably established on the basis of the instrumentation and an extensive literature review. Kerlinger (1967:446) noted that content validity consists essentially in judgement, and the pool of items were essentially developed from the collective judgements of other researchers, and writers in this field. Two additional items were added tc the compressed work week questionnaire after the pilot study to examine: (1) the impact of the compressed work week on consumer spending habits, and (2) the effect upon child minding arrangements.

Construct Validity. Kerlinger (1967:449) stated that:

> the significant point abcut construct validity, that which sets it apart from other types of validity, is its preoccupation with theory, theoretical constructs, and scientific empirical enquiry including the testing of hypothesized relations.

Factor Analysis. Thus as part of the pilot analysis to examine the construct validity some factcr analysis testing was undertaken to determine if any factors or constructs could be identified to account for differences between groups in test performance.

Factor analysis was undertaken for the pool of items used for the questions relating to job satisfaction and organizational performance. A listing of the variables, the obtained variance factor loadings, and the identification of factors are presented in Appendix B. The factors identified in this pilot analysis were used to assist in the development of a basis for comparison for data analysis in later sections of this study.

Correlation Analysis. Furthermore some correlation co-efficients were obtained to determine the validity of the items contained in the personal data sheet.

The variables contained in the personal data sheet were correlated with scores obtained on items concerning job satisfaction. For the continuous variables Pearson correlation co-efficients were utilized.

For each of these continuous variables only correlation co-efficients that were found to be significant of the .05 level of probability are reported.

The variables included in the question on job satisfaction were numbered for the purposes of this analysis and a listing of this numbering system is contained in Appendix C.

Furthermore the correlation statistics reported in

Appendix C indicated that for each of the continuous variables used in the pilot study a number of significant correlations were established at a .05 probability level.

Thus it was decided to retain all of these personal variables in the final questionnaire and to make one addition i.e. Length of employment in the relevant government departments.

Scheffe - One Way Analysis of Variance. Finally in the pilot study, the items presented in the questions relating to job satisfaction and organizational performance were examined to analyze the extent to which this pool of items discriminated among the 3 groups of respondents. The D.E.R.S. ANOVA 15 program was utilized to examine differences among mean scores on these likert scale items. For the question on perceptions of organizational performance only the first likert type scale was used in the analysis. As a result of this pilot study the second section of this scale was modifed to obtain perceptions of the perceived importance of any recorded change in organizational performance.

A summary of the obtained significant differences between mean scores for these 3 groups is presented in Appendix D.

For the items contained in the question on job satisfaction statistically' significant differences were found between at least one pair of means for 6 out of the 10 items.

Two of the remaining four items where no significant differences were found, provided somewhat unexpected results in view of the current literature and research results in this area.

(1) No significant differences were found concerning the methods used for keeping track of hours of work each day. The literature suggests that there has been a large degree of dissatisfaction in flextime organizations that employ a Hengstler time clock (Variable 3). (2) No significant differences were found concerning employee satisfaction with the methods they now used to complete and organize their work (Variable 30).

Alternatively, for the question on organizational performance, in summary significant differences were found between at least one pair of means for 8 of the 19 items used in this subsection.

It is considered that more differences MAY have been found had it not been for a possible contamination effect of the other parts of this scale that were used, that may have confused respondents' replies to this question.

It was anticipated that significant differences would have been found for the following questions based on the results of previous studies and literature reviews.

Variable

1 -- Travel to and from work

4 -- Your overall work performance

7 -- Degree of difficulty in scheduling work requiring others

9 -- Ability to arrange meetings with others when necessary.

Thus, in the final form of the questionnaire this second section of this scale has been modified so that it now measures the perceived importance of any specific recorded change in organizational performance. Copies of the questionnaires used in this study are contained in Appendix E.

(2) Hours of Work -- Interview Schedule

As outlined earlier in addition to the questionnaire data, additional information will be obtained from a series of semi-structured interviews, involving both management and non-management respondents.

During the pilot study only 6 interviews were conducted with administration and non-administrative personnel at this stage. A schedule of the interviews conducted in the pilot study is presented in Table 8.

Table 8

Schedule of Interviews Conducted in Pilot Study

	Administrators	Non Administrators
Pension Board	1	1
Social Service Department	1	1
Transportation Board	1	1

On the basis of information gained from this pilot test of the interview schedule a number of minor modifications were made to the phraseology and organization of some of the questions contained in the interview schedule.

The sources of information previously outlined were also employed in the designing of the interview schedules.

The interview schedule consisted of a series of closed and open ended questions (Appendix F). Also a tape recorder was used in the interview situation to provide the details for respondents answers to the open ended questions.

OPERATIONAL COST ANALYSIS

In addition to the data obtained from respondents utilizing the instrumentation previously outlined, some additional data was obtained concerning operational costs associated with alterations in the structuring of the work week.

Labor Costs. The research design sought to obtain some statistical data from government personnel records relating to the following aspects of labor costs.

1. Paid absences for Employees.
2. Labor Turnover
3. Additions to Staff
4. Arrival and Departure Times
5. Overtime Costs.

Capital Costs. Data concerning changes in capital costs was also to be investigated, such as:

1. Costs of Time Keeping Devices.

STATISTICAL TREATMENT OF THE DATA

The statistical analysis undertaken for this study involved the use of both inferential and descriptive statistics. Descriptive statistics simply involve are numerical description of a group, and no conclusion may be extended beyond the group. Descriptive statistics such as frequencies and percentages distribution, were employed to, analyze the personal characteristics of each group of respondents. On the other hand, inferential analysis uses a statistic computed from a sample to estimate the parameter of a population. It is assumed that within a margin of error the randomly selected sample approximates the population.

The importance of inferential statistics is outlined by Ferguson (1971:10):

> Unless the intention is to generalize from a sample to a population, unless the procedures are such as to enable such generalizatons, justifiably to be made, and unless some estimate of error can be obtained, the conduct of experiments is without point.

For the purposes of this study random samples were selected from three populations, namely flextime, compressed work week and standard hour groups and inferential statistics were employed with the intent of making inferences about the population parameters on the basis of sample statistics.

Information obtained from inferential statistics always involves the possibility of sampling error. Sampling error arises when the characteristics of one sample are not identical with due characteristics of the population. To overcome this problem, the researcher can apply a test of statistical significance, which indictes the probability with which the differences between samples can be attributed to differences in the population rather than sampling error. To be objective the significance level should be set before the statistical analysis is undertaken. The setting of a significacnce level is an individual matter for the researcher, and it depends upon the type of situation and the importance and practical significance of the findings. For the purposes of this study findings that differed between groups with a probability level less than or equal to .05 were reported as being 'significant.' This infers that there is a 95 per cent chance that differences indicated on the samples did not arise as a result of chance error in random sampling, but rather the differences could be inferred to exist in the population. Probability levels were also reported at the .01 level of significance.

In the computer analyses of the data the SPSSH -- Version 6.02 statistical program (statistical Package for the Social Sciences) was used to determine the frequency and percentage of responses for each item of the questionnaire, for each group of respondents.

An analysis of variance ANOV 15 (Division of Educational Research Services) was applied to the data to determine the mean scores and variances for each groups' responses to the questions relating to job satisfaction and organizational performance. Scheffe Multiple comparison of means test was used to determine significant differences between the groups' responses for each item. If the variance for these means is not homogeneous, caution should be exercised when examining significant differences between means. In this study the obtained homogeneity of variance chi-square and the associated probability were discussed when the variance was found not to be homogeneous.

For each group of respondents the DESTO 5 statistical program (Division of Educational Research

Services) was used to calculate Pearson correlation coefficients for the continuous variables from the personal data section of the questionnaire, with each of the items related to job satisfaction and organizational performance.

Within each sample the ANOV 10 statistical program was used for t-tests to calculate significant differences between the mean scores for changes in respondents hours of work since the introduction of a specific innovation in their branches.

DESCRIPTION OF THE SAMPLE

The response categories for the items included in the personal data sheets for each group of respondents were considered to be ordinal in nature. Frequency and percentage distributions were determined for all groups of respondents for each response category within each item. The percentage distribution of responses can be used to provide an indication of the strength and direction of the responses for each of the variables included in the pesonal data section of the questionnaire.

A clause was included on the front page of the questionnaire that stated if any question was considered to be an invasion of privacy by the respondent, then that particular item could be left unanswered. For this reason within each group the number in the sample that responded to any particular question in the personal data sheet could vary. In the following tables that describe the characteristics of the respondents, the size of the sample (N) has been reported in all cases.

Characteristics of Standard Hours Respondents

The total Standard Hours sample comprised 132 respondents. The frequency and percentage distribution for male and female respondents is presented in Table 9. There were more males than females in the sample, as there were 73 males comprising 55.7 percent of the sample as opposed to 58 females comprising 44.3 percent of the sample. This was the only group in which there were more male than female respondents.

Table 10 showed that the respondents in this group tended to be older than respondents in the other innovative groups. It was found that 66.7 percent of the sample were included in the age range 30-59 years old.

Furthermore, there were more management personnel included in the respondents within this group, than the other two groups. Table 11 revealed that 44.1 percent of the respondents in this sample were included in the management classification. In addition 47.3 percent of the respondents were classified as Administrative and Clerical Support Staff.

An examination of Table 12 revealed that 52.8

Table 9

Frequency and Percentage Distribution of Female and Male Respondents

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Sex	f	%	f	%	f	%
Female	58	44.3	30	81.1	151	68.3
Male	73	55.7	7	18.9	70	31.7
N	131	100.00	37	100.00	221	100.00

Table 10

Frequency and Percentage Distribution for the Age Categories of Respondents[a]

Age Category	Standard Hours Group		Compressed Work Week Group		Flextime Group	
	f	%	f	%	f	%
< 20 years	9	6.8	7	19.4	23	10.3
20-29 years	26	19.7	16	44.4	82	36.6
30-39 years	27	20.5	6	16.7	49	21.9
40-49 years	32	24.2	3	8.3	42	18.8
50-59 years	29	22.0	3	8.3	21	9.4
> 60 years	9	6.8	1	2.8	7	3.1
N	132	100.00	36	100.00	224	100.00

[a] Age as of last birthday.

Table 11

Frequency and Percentage Distribution for the Occupational Categories of Respondents[a]

Occupational Category	Standard Hours Group f	Standard Hours Group %	Compressed Work Week Group f	Compressed Work Week Group %	Flextime Group f	Flextime Group %
Management						
1. Executive Officer I	4	3.1	2	5.4	6	2.7
2. Executive Officer II	7	5.4	-	-	6	2.7
3. Senior Officer I	7	5.4	3	8.1	9	4.0
4. Senior Officer II	39	30.2	1	2.7	14	6.3
Non Management						
5. Administrative & Clerical Support Services	61	47.3	25	67.6	95	42.6
6. Administrative & Program Support Services	2	1.6	3	8.1	6	2.7
7. Trade & Related Services	3	2.3	-	-	-	-
8. Social Services Division	-	-	-	-	3	1.3
9. Institutional & Patient Support Services	-	-	-	-	-	-
10. Educational Services	4	3.1	2	5.4	70	31.4
11. Health & Therapy Support Services	-	-	1	2.7	-	-
12. Medical & Rehabilitative Services	1	0.8	-	-	-	-
13. General & Field Support	-	-	-	-	-	-
14. Technical Services Bargaining Division	1	0.8	-	-	9	4.0
15. Other[b]	-	-	-	-	5	2.2
N	129	100.00	37	100.00	223	100.00

[a] Based on Personnel Classification utilized within Department of Education.

[b] Includes Teachers, Teacher Supervisors, Computer Programmers and Systems Analysts.

Table 12

Frequency and Percentage Distribution for the Income Categories for Each Group of Respondents

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Income Category	f	%	f	%	f	%
<$5,000	-	-	-	-	-	-
$5,000-9,999	38	29.5	21	58.3	95	42.8
$10,000-14,999	30	23.3	9	25.0	43	19.4
$15,000-19,999	3	2.3	4	11.1	33	14.9
$20,000-24,999	13	10.1	-	-	29	13.1
$25,000-29,999	20	15.5	1	2.8	13	5.9
>$30,000	25	19.4	1	2.8	9	4.1
N	129	100.00	36	100.00	222	100.00

percent of the sample had incomes of less than $14,999 per annum. Alternatively 34.9 percent of the sample had an annual income in excess of $25,000. This percentage was much higher than the other two groups.

Table 13 showed that 76.2 percent of the respondents were married. Only 4.6 percent of the respondents were concluded in the separated, widowed or divorced category.

The information obtained from respondents relating to their responsibilities regarding children or other dependents who require personal assistance before or after work is presented in Table 14. Only 32.3 percent, or 41 respondents indicated that they did have these types of responsibilities. However, this figure was higher than the statistics for the other two groups.

This could be associated with the information presented in Table 15 that indicates that approximately 50 percent of this sample do not have any children less than 18 years of age living at home.

An examination of Table 16 showed that the highest level of education obtained for 52 respondents or 40.3 percent of the sample was high school, (grades 7-12). Alternatively, 41 respondents, or 31.8 percent of the sample indicated that they hold more than one degree or diploma.

Table 17 revealed that almost 50 percent of married

Table 13

Frequency and Percentage Distribution for the Marital Status of Each Group of Respondents

Marital Status	Standard Hours Group		Compressed Work Week Group		Flextime Group	
	f	%	f	%	f	%
Single	25	19.2	17	45.9	73	32.6
Married	99	76.2	18	48.6	136	60.9
Other[a]	6	4.6	2	5.4	14	6.4
N	130	100.00	37	100.00	223	100.00

a Includes separated, widowed, divorced.

Table 14

Frequency and Percentage Distribution for Respondents Who Have School Age Children or Other Dependents Who Require Personal Assistance Before or After Work

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Assistance Required	f	%	f	%	f	%
Yes	41	32.3	4	10.8	62	27.7
No	86	67.7	33	89.2	162	72.3
N	127	100.00	37	100.00	224	100.00

Table 15

Frequency and Percentage Distribution for the Number of Children 18 Years of Age or Less, Living at Home for Each Group of Respondents

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Number of Children	f	%	f	%	f	%
None	62	49.6	27	75.0	146	66.7
One	20	16.0	5	13.9	32	14.6
Two	26	20.8	3	8.3	27	12.3
Three	14	11.2	-	-	6	2.7
Four	1	0.8	1	2.8	5	2.3
More than Four	2	1.6	-	-	3	1.4
N	125	100.00	36	100.00	219	100.00

Table 16

Frequency and Percentage Distribution for the Highest Level of Formal Education for Respondents in Each Group

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Highest Level of Formal Education	f	%	f	%	f	%
Elementary School (Grades 1-6)	-	-	-	-	1	0.4
Highschool (Grades 7-12)	52	40.3	24	66.7	91	39.8
1-2 years Post Secondary	16	12.4	5	13.9	12	5.3
Degree or Diploma Program (Non University)	11	8.5	4	11.1	22	9.7
Degree or Diploma Program (University)	3	2.3	1	2.8	37	16.4
More than one Degree or Diploma Program	41	31.8	2	5.6	57	25.2
Other[a]	6	4.7	-	-	7	3.1
N	129	100.00	36	100.00	226	100.00

a Includes

Table 17

Frequency and Percentage Distribution for the Employment Status for the Spouse of Each Group of Respondents

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Employment Status of Spouse	f	%	f	%	f	%
Full Time	50	39.7	10	29.4	89	40.5
Part Time	7	5.6	1	2.9	10	4.5
Not Employed	41	32.5	5	14.7	37	16.8
Not Married	28	22.2	18	52.9	84	38.2
N	126	100.00	34	100.00	220	100.00

respondents had a spouse that was employed full-time. It can be seen that 50 respondents had a spouse employed full-time, whereas 41 respondents indicated their spouse was not employed and a further 7 respondents stated their spouse was employed part-time.

Finally, Table 18 indicated that 61 respondents or 47.3 percent of the sample had been employed in their respective branches for more than 48 months. This figure was higher than for two experimental groups.

Characteristics of Compressed Work Week Respondents

The total compressed work week sample comprised 37 respondents. The number of respondents in this group was much smaller than the other two groups because at this time only one branch is experimenting with a compressed work week system in the Alberta Department of Education.

Table 9 indicated that the majority of the staff in this branch are female, as women comprised 81.1 percent of the respondents.

The information presented in Table 10 showed that this group also tended to be much younger than the Standard Hours group as 63.6 percent, or 23 respondents were less than 30 years old.

An examination of Table 11 showed that 67.6 percent, or 25 of the respondents were classified as Administrative

Table 18

Frequency and Percentage Distribution for the Employment History within Respective Branches for Each Group of Respondents

	Standard Hours Group		Compressed Work Week Group		Flextime Group	
Length of Employment	f	%	f	%	f	%
< 6 months	10	7.8	2	5.4	18	8.0
6-12 months	8	6.2	4	10.8	22	9.7
13-24 months	18	14.0	10	27.0	42	18.6
25-36 months	21	16.3	8	21.6	33	14.6
37-48 months	11	8.5	2	5.4	14	6.2
> 48 months	61	47.3	11	29.7	97	42.9
N	129	100.00	37	100.00	226	100.00

and Clerical Support Services, which is a non-management classification. However, 16.2 percent of the sample, or 6 respondents were included in the management classification.

Table 12 indicated that 30 respondents, or 83.3 percent of the sample received an income of less than $15,000 per annum. Only 5.6 percent of the sample, or 2 respondents received annual incomes in access of $25,000.

The information presented in Table 13 showed that approximately half of the respondents are married. It was found that 18 respondents, or 48.6 percent of the sample were married, and 17 respondents or 45.9 percent of the sample were single.

Table 14 outlined information relating to the number of dependents who require personal assistance before or after work. Only a very small percentage of respondents, 10.8 percent or 4 respondents indicated that they were involved with these types of responsibilities.

This could be related to the findings presented in Table 15. Where it was found that 75.0 percent of these respondents did not have any children under 18 years of age, living at home. This figure was higher than the similar statistic for the other two groups.

Table 16 showed that the highest level of education obtained for 24 respondents, or 66.7 percent of the sample was high school (grades 7-12). Very few respondents, 5.6 percent of the sample indicated that they held more than one degree or diploma. This figure was much lower than that obtained for the other two groups.

The information presented in Table 17 showed that for the married respondents, 10 respondents or 62.5 percent of the sample had a spouse that worked full-time. Alternatively 5 respondents or 31.2 percent of the sample indicated that their spouse was not employed.

Finally, Table 18 showed that only 29.7 percent, or 11 respondents within this sample had worked in this branch for more than 48 months. This figure was much lower than that obtained from the other two groups.

Characteristics of Flextime Respondents

The total flextime sample comprised 227 respondents. The sample consisted of 151 females, or 68.3 percent of the sample, and 70 males or 31.7 percent of the sample. This data is presented in Table 9.

Table 10 showed that 173 respondents comprising 77.3 percent of the sample were between 20-49 years old.

The information presented in Table 11 indicated that 35 respondents, comprising 15.7 percent of the sample were classified in management categories. As was the case with the other two groups a large number of non-management respondents were included in the Administrative and Clerical Support Services classification. In this case 95 respondents, or 42.6 percent of the sample were included in this non-management classification.

It was found that 42.8 percent of this sample, or 95 respondents received an annual income of less than $10,000. Alternatively 105 respondents or 47.4 percent of the sample received annual incomes between $10,000-$24,999. This information is contained in Table 12.

Table 13 showed that 136 respondents, comprising 60.9 percent of the sample were married. On the other hand, 73 respondents or 32.6 percent of the sample were single.

The information presented in Table 14 showed that only 62 respondents or 27.7 percent of the sample had children of school age or other dependents who required personal assistance before or after work.

Again this could be related to the findings in Table 15 that showed that 146 or 66.7 percent of this sample do not have any children under 18 years of age living at home. However, 59 respondents, comprising 26.9 had one or two children under 18 years old living at home.

Table 16 showed that 57 respondents comprising 25.2 percent of the sample had more than one degree or diploma.

Alternatively 39.8 percent of the sample, or 91 respondents had not gone beyond high school (grades 7-12) with their formal education.

The information presented in Table 17 indicated that for the married respondents 89 respondents or 65.4 percent of this group, had a spouse working full-time. Furthermore, 10 respondents or 7.3 percent of this married group had a spouse working part-time.

Finally, Table 18 showed that 42.9 percent of the sample or 97 respondents had worked in these branches for more than 48 months.

CHAPTER SUMMARY

This chapter focused upon the research design and development of the instrumentation used in this study. The populations from which the stratified random samples were drawn were identified, and the method used to select the sample was discussed. The sample of respondents used in the study consisted of 132 Standard Hours respondents, 37 Compressed Work Week respondents and 227 Flextime respondents.

The development and validation of the instrumentation used in this study was discussed incorporating a summary of the findings and recommended changes arising from the pilot study.

The method of data collection was explained, and the statistical treatment of the data outlined.

Finally, a profile of the personal characteristics of the respondents was presented by applying descriptive statistics to this data.

CHAPTER 4

RESEARCH FINDINGS: INTER-GROUP ANALYSIS OF PERCEPTIONS OF ORGANIZATIONAL OPERATIONS ASSOCIATED WITH DIFFERENT WORKWEEK STRUCTURES

This is the first of four chapters that deal with the analysis of the data gathered for this study. The first section focuses upon significant differences among all groups for factors relating to job satisfaction.

The second section examines significant differences in perceptions of respondents concerning aspects of organizational performance within their respective workweek structure.

PERCEPTIONS CONCERNING JOB SATISFACTION AND WORKWEEK STRUCTURES

The first phase of the empirical analysis was directed towards an examination of the rank ordering of mean scores as determined by the respondents perceptions of aspects of job satisfaction associated with a particular workweek structure.

Secondly, this section of the study examined inter-group comparisons involving total personnel, management and non-management perceptions of job satisfaction within their respective worksites.

Job Satisfaction Priorities for Standard Hours Group

The rank ordering of means for all operationally defined aspects of job satisfaction is displayed in Table 19. In order of priority the three most satisfactory aspects of the job relating to Standard Hours program in these branches were: (1) The way they now organize and complete their work, (2) The method of keeping track of hours worked each day, and (3) The arrangements employees have to travel to and from work.

Alternatively in order of priority the three least satisfactory aspects of the job relating to Standard Hours program were: (1) The freedom employees have to decide when they will arrive and depart from work. (2) The utilization of the service provided by the bus system and (3) Freedom to handle personal business during the day.

Job Satisfaction Priorities for Compressed Hours Group

The rank order of mean scores as determined by Compressed Hours respondents for aspects of job satisfaction is presented in Table 19. The three most satisfactory aspects of the job relating to the Compressed Hours program were: (1) The arrangement personnel have to travel to and from work, (2) The overall program within the department and (3) The method of keeping track of hours worked each day.

On the other hand, the three least satisfactory aspects of the job relating to the Compressed Hours program were: (1) Freedom to handle personal business during the workday, (2) Freedom personnel have to decide when they will arrive and depart from work, and (3) Freedom to handle personal business during the workday.

Job Satisfaction Priorities for Flexible Hours Group

Further reference to Table 19 disclosed the rank order of means as determined by Flextime respondents for job satisfaction. In order of priority, the Flextime group considered the three most satisfactory aspects of the job relating to Flexible Hours were: (1) The arrangements personnel have to travel to and from work, (2) The freedom personnel have to decide when they will arrive and depart from work and (3) The overall program in the department.

Furthermore, the Flextime group considered that in order of priority the three least satisfactory aspects of the job relating to Flextime were: (1) The way in which the program is organized (2) Changes which have occurred in the way work is done and (3) The utilization of the service provided by the bus system.

Comparative Analysis of the Mean Scores for Job Satisfaction

The information presented in Figure 10 shows a profile of Standard, Compressed and Flexible hours

Table 19

Means, Standard Deviations and Rank Order of Means for Job Satisfaction[a]

Job Satisfaction	Standard Hours				Compressed Hours				Flexible Hours			
	N	Mean	S.Dev.	Rank Order of Means	N	Mean	S.Dev.	Rank Order of Means	N	Mean	S.Dev.	Rank Order of Means
1. The over-all program in your department	130	2.12	0.93	3	36	1.50	0.70	2	223	1.67	0.64	3
2. The way in which the program is organized	132	2.19	0.94	6	36	1.61	0.69	6	2[illegible]	1.85	0.74	8
3. The method of keeping track of the hours worked each day	132	2.09	0.97	2	36	1.50	0.66	2	225	1.75	0.78	7
4. The freedom you have to decide when you will arrive and depart from work	132	2.89	1.42	8	30	1.96	0.89	9	226	1.61	0.93	2
5. The way your immediate supervisor is administering the program	132	2.14	1.04	5	35	1.57	0.70	5	224	1.74	0.87	6
6. The arrangements you have for travel to and from work	132	2.12	1.41	3	37	1.40	0.50	1	225	1.60	0.71	1
7. Freedom to handle personal business during the workday	132	3.04	1.21	10	36	1.75	0.71	8	226	1.68	0.74	4
8. Your utilization of the service provided by the bus system	123	2.97	0.97	9	32	2.34	1.10	10	189	2.57	0.96	10
9. Changes which have occurred in the way work is done	131	2.46	0.84	7	35	1.63	0.60	7	218	2.09	0.80	9
10. The way you now organize and complete your work	131	2.01	0.78	1	36	1.55	0.50	4	224	1.72	0.66	5

[a] Likert Scale: Very Satisfied (1) Satisfied (2) No Opinion (3) Dissatisfied (4) Very Dissatisfied (5)

Job Satisfaction

1. The over-all program in your department
2. The way in which the program is organized
3. The method of keeping track of the hours worked each day
4. The freedom you have to decide when you will arrive and depart from work
5. The way your immediate supervisor is administering the program
6. The arrangements you have for travel to and from work
7. Your utilization of the service provided by the bus system
8. Changes which have occurred in the way work is done
9. The way you now organize and complete your work
10. Freedom to handle personal business during the workday

······ Flexible Hours

______ Compressed Hours

- - - - Standard Hours

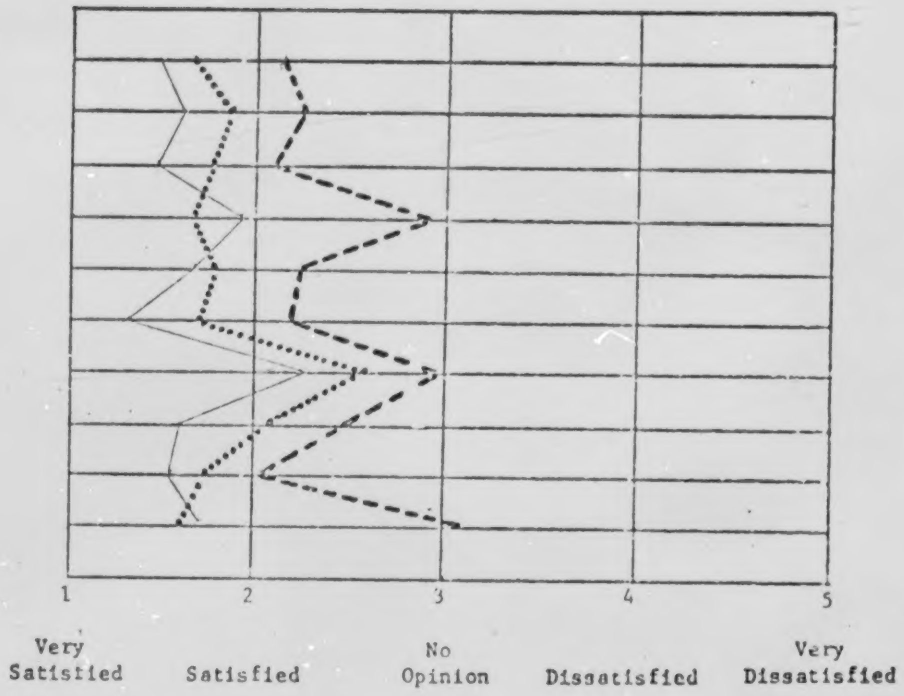


Figure 10

Profile of Standard, Compressed and Flexible Hours Priorities Relating to Job Satisfaction priorities for variables relating to job satisfaction.

High Priorities Relating to Job Satisfaction. There was considerable dissensus among all three groups with regard to the three most satisfactory aspects of the job in these various workweek structures. Only one variable, namely, 'the arrangements personnel have to travel to and from work' was included among the three most satisfactory aspects of the job environment by all three groups. However, 'the method of keeping track of hours worked each day' was included by the standard and Compressed Hours groups.

Low Priorities Relating to Job Satisfaction. Here again there was fairly low consensus between the three groups concerning the least satisfactory aspects of their job environment. One variable, 'the utilization of the service provided by the bus system' was included by all three groups as unsatisfactory. Furthermore, the standard and Compressed Hours groups were dissatisfied with 'the freedom they have to arrive and depart from work,' and 'the freedom they have to handle personal business during the day'.

INTRA-GROUP ANALYSIS OF DIFFERENCES BETWEEN MEANS FOR JOB SATISFACTION

The second phase of the empirical analysis was directed towards a statistical comparison of the mean responses for job satisfaction, as determined by each group of respondents.

The statistical procedure utilized for this purpose was a one way analysis of variance procedure using Scheffe multiple comparison of means to determine significant differences, among groups of respondents.

Throughout this section statistical significance has been reported at the .05 level of probability for the obtained F ratio and statistical significance for any pair of means has been reported at the .05 and .01 level of probability.

In some cases the obtained homogeneity of variance chi-square did not satisfy this .05 significance level, and thus the obtained variance was not homogeneous for these cases.

However Ferguson (1971) and Winer (1962) commenting on assumptions underlying the analysis of variance procedure emphasised the following points. A first assumption in the application of analysis of variance is that the variances in the population from which the samples are drawn are equal. However, Ferguson (1971:219) stated "Moderate departures from homogeneity should not seriously effect the inferences drawn from the data."

Winer (1962:33) supports this view, when he stated:

> Moderate departures from the hypothesis that = do not seriously affect the accuracy of the decisions reached ... in more technical language the t test [and the F test] is *robust* with respect to moderate departures from the hypothesis of homogeneity of variance."

Furthermore, Winer (1962:92) pointed out:

> "... when the variances in the population are not equal, the F statistic using a pooled variance has approximately the same distribution as the F statistic which takes the differences in the population variances into account".

A second assumption is that the distribution of the dependent variable in the population from which the samples are drawn is normal. However, Ferguson (1971:219) stated:

> When the samples are fairly small, it is usually not possible to rigorously demonstrate lack of normality in the data. Unless there is a reason to suspect a fairly extreme departure from normality, it is probable that the conclusions drawn from the data using an F test will not be seriously effected.

Thus, although in some cases the obtained homogeneity of variance chi-square did not satisfy the .05 significance level, the seriousness of this limitation is well summarized by Ferguson (1971:219):

> With most sets of real data the assumptions underlying the analysis of variance are, at best, only roughly satisfied. The raw data of experiments frequently do not exhibit the characteristics which the mathematical models require. One advantage of the analysis of variance is that reasonable

> departures from the assumptions of normality and homogeneity may occur without seriously affecting the validity of the inferences drawn from the data.

However, whenever this homogeneity of variance assumption was not satisfied at the .05 significance level, this will be noted in the analysis.

Analysis of Variance: Job Satisfaction

Appendix G presents a factor analysis of the items included in this section of the study on job satisfaction and workweek structures. A two factor solution was derived as this was used to provide the framework for the following analysis.

Factor A. Schedule Monitoring

(1) The Overall Program in your Department.

The information presented in Table 20 shows the obtained means for each group of respondents, the F ratio and the associated probability, and the Scheffe multiple comparison of mean probabilities for significant differences between each pair of means.

Total Personnel. The probability level of 0.0 for the obtained F ratio, showed that at least one significant difference occurred between the pairs of means of these

Table 20

Scheffe Analysis of Variance for Job Satisfaction

.1. Overall Program in Your Branch

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	130	2.12	1,2	0.00^{b}	57	1.90	1,2	0.70	70	2.30	1,2	0.00^{b}
2. Compressed Hours	36	1.50	1,3	0.00^{b}	5	1.60	1,3	0.96	31	1.48	1,3	0.00^{b}
3. Flexible Hours	223	1.67	2,3	0.46	33	1.85	2,3	0.78	186	1.63	2,3	0.61

F. Ratio = 17.7 Probability = 0.00 F. Ratio = 0.37 Probability = 0.69 F. Ratio = 23.28 Probability = 0.00

b Significant at .01 level.

three groups.

Further inspection of the Scheffe probabilities for each pair of means revealed that statistically significant differences occurred between the mean for standard and Compressed Hours. The mean for the Compressed Hours group, 1.50 was significantly lower than the mean for the Standard Hours group at the 0.00 probability level. This indicated that the former group was more satisfied with the overall program in their branches.

Similarly, significant differences were found between the Standard Hours mean score, 2.12 and the Flextime mean, 1.67 at the 0.00 probability level. This indicated that the latter group was more satisfied with the overall program in their branches. It should be noted that the obtained homogeneity of variance chi-square was significant at the .05 level for these groups, and the variance was not homogeneous.

Management. Table 20 showed that no significant differences were obtained among the mean scores of the various management groups for this item.

Non-Management. The probability level of 0.0 for the obtained F ratio indicated significant differences occurred for at least one pair of means. Further investigation showed that the mean of 2.30 for the Standard Hours group was significantly higher than the mean for the Compressed Hours group, 1.48, at the 0.00 probability level. Thus the Compressed Hours group were significantly more satisfied with the overall program in their branch.

Furthermore, Table 20 revealed that the mean of 2.30 for the Standard Hours group, and the mean of 1.63 for the Flextime group were significantly different at the 0.00 probability level. Again, the innovative group, the Flextime group, was more satisfied with the overall program in their branches. The obtained homogeneity of variance chi-square did not indicate homogeneity at the .05 significance level for this item.

(2) The Way in Which the Program is Organized

Total Personnel. Table 21 showed that the obtained F ratio had an associated probability of 0.00. Therefore, significant differences occurred between at least one pair of means. The Scheffe test showed that significant differences occurred at the 0.00 probability level, between the standard hours mean score of 2.19 and the Compressed Hours mean score of 1.61. Thus, the Compressed Hours group were more satisfied with the way in which the program is organized in their branch.

Similarly at the 0.00 level of probability differences were found between the Standard Hours mean score

Table 21

Scheffe Analysis of Variance for Job Satisfaction

2. The Way in Which the Program is Organized

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.19	1,2	0.00[b]	57	1.91	1,2	0.76	72	2.42	1,2	0.00[b]
2. Compressed Hours	36	1.61	1,3	0.00[b]	5	2.20	1,3	1.00	31	1.52	1,3	0.00[b]
3. Flexible Hours	224	1.85	2,3	0.26	34	1.91	2,3	0.77	186	1.83	2,3	0.12

F. Ratio = 10.73 Probability = 0.00 F. Ratio = 0.28 Probability = 0.75 F. Ratio = 19.41 Probability = 0.00

b Significant at .01 level.

of 2.19 and the Flextime mean score of 1.85. Because the Flextime mean was significantly lower this indicated that this innovative group was more satisfied with the way the program was organized in their branches.

Management. Table 21 showed that no significant differences were found between the mean scores for the respective groups of managers for this item.

Non-Management. The probability level of 0.0 indicated significant differences occurred for at least one pair of means. The obtained mean for the Standard Hours group, 2.42 was significantly different from the mean of 1.52 for the Compressed Hours group at the 0.00 probability level. Thus, the compressed workweek group was more satisfied with the way the program was organized in their branch.

Furthermore, Table 21 showed that the the Standard Hours mean, 2.42 was significantly higher than the Flextime mean score of 1.83 at the 0.00 probability level. Again, the innovative group was more satisfied with the way in which the program was organized. The obtained homogeneity of variance chi-square for this item indicated the variance was not homogeneous.

(3) Method of Keeping Track of Hours Worked

Total Personnel. The probability level of 0.00 for the obtained F ratio indicated significant differences between at least one pair of means. Further examination revealed that the Standard Hours mean 2.09 was significantly higher than the Compressed Hours mean of 1.50 at the 0.00 probability level. Thus, the Compressed Hours group were more satisfied with the methods used to keep track of hours worked.

Furthermore, the Standard Hours mean 2.09 was also significantly higher than the Flextime mean of 1.75 at the 0.00 probability level. Again, the innovative group was more satisfied with the method used to keep track of hours worked. It should be noted that the obtained homogeneity variance chi-square was not homogeneous for these groups. This information is presented in Table 22.

Management. The probability level of 0.29 for the obtained F ratio indicated that there were no significant differences in the mean scores for management groups on this item. This data is presented in Table 22.

Non-Management. Table 22 showed that the obtained F ratio had an associated probability of 0.00, and thus at least one pair of means was significantly different. The Standard Hours mean, 2.19 was significantly higher than the Compressed Hours mean of 1.50 at the 0.00 probability level. Thus, the Compressed Hours group were more satisfied with

Table 22

Scheffe Analysis of Variance for Job Satisfaction

3. Method of Keeping Track of Hours Worked

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.09	1,2	0.00^b	57	1.95	1,2	0.47	72	2.19	1,2	0.00^b
2. Compressed Hours	36	1.50	1,3	0.00^b	6	1.50	1,3	0.74	30	1.50	1,3	0.00^b
3. Flexible Hours	225	1.75	2,3	0.24	33	2.09	2,3	0.29	188	1.68	2,3	0.55
	F. Ratio = 10.14 Probability = 0.00				F. Ratio = 1.27 Probability = 0.29				F. Ratio = 12.53 Probability = 0.00			

b Significant at .01 level.

the method used to keep track of hours worked.

Furthermore, the Standard Hours mean, 2.19 was significantly higher than the Flextime mean of 1.68 at the 0.00 probability level. Thus, the Flextime group was more satisfied with the methods used to keep track of hours worked. The obtained homogeneity of variance chi-square indicated that the variance was not homogeneous at the .05 level of significance.

Summary. Thus for these aspects of schedule monitoring a number of significant differences were found among non-management personnel, but there was a high degree of consensus among management from across these different workweek structures.

Factor B. - Individual Autonomy

(4) Freedom on Decisions of Arrival and Departure

Total Personnel. Table 23 disclosed that the obtained F ratio had an associated probability of 0.0, and therefore at least one pair of means were significantly different. The Scheffe test showed that the Standard Hours mean, 2.89 was significantly higher than the Compressed Hours mean of 1.96, at the 0.00 probability level.

Furthermore, the Standard Hours mean, 2.89 was also significantly higher than the Flextime mean of 1.61, with an

Table 23

Scheffe Analysis of Variance for Job Satisfaction

4. Freedom on Decisions of Arrival and Departure

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.89	1,2	0.00[b]	57	1.97	1,2	0.89	72	3.65	1,2	0.00[b]
2. Compressed Hours	30	1.96	1,3	0.00[b]	5	2.20	1,3	0.21	25	1.92	1,3	0.00[b]
3. Flexible Hours	226	1.61	2,3	0.28	34	1.56	2,3	0.45	188	1.62	2,3	0.37

F. Ratio = 53.63 Probability = 0.00 F. Ratio = 1.90 Probability = 0.16 F. Ratio = 110.33 Probability = 0.00

[b] Significant at .01 level.

associated probability of 0.00.

Thus, in both instances the innovative groups were more satisfied with their freedom of decisions on arrival and departure from work. The homogeneity of variance chi-square indicated that the variances were not homogeneous for this item at the .05 level of significance.

Management. No significant differences were obtained for the means from management groups for this item. This information is presented in Table 23.

Non-Management. Further examination of Table 23 disclosed that the obtained F ratio had an associated probability of 0.0, and thus at least one pair of means were significantly different.

Further investigation revealed that the Standard Hours mean was significantly higher from both the Compressed Hours mean, 1.92 and the Flextime mean of 1.62, at the 0.00 probability level.

Thus both of the innovative groups of non-management were significantly more satisfied with their freedom of decisions on arrival and departure from work.

(5) Administration of Program by Supervisor

Total Personnel. The information presented in Table

24 revealed that the obtained F ratio had an associated probability of 0.0 and therefore at least one pair of means were significantly different.

Further investigation revealed that the Standard Hours mean of 2.14 was significantly higher than Compressed Hours mean, 1.57 and the Flextime mean of 1.74 at the 0.01 probability level.

Thus the innovative groups were significantly more satisfied with the administration of the program in their branches by their supervisors. The homogeneity of variance chi-square indicated that the variances were not homogeneous for this item at the .05 level of significance.

Management. The obtained F ratio had an associated probability of 0.23 indicating no significant differences among management mean scores on this item. This information is presented in Table 24.

Non-Management. Table 24 indicated that the obtained F ratio had an associated probability of 0.0.

Further examination revealed that the Standard Hours mean of 2.54 was significantly higher from both the Compressed Hours mean, 1.47 and the Flextime mean of 1.71, at a 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the obtained variances were not homogeneous at the .05 level of significance.

Table 24

Scheffe Analysis of Variance for Job Satisfaction

5. Administration of Program by Supervisor

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.14	1,2	0.01[b]	57	1.63	1,2	0.35	72	2.54	1,2	0.00[b]
2. Compressed Hours	35	1.57	1,3	0.00[b]	5	2.20	1,3	0.50	30	1.47	1,3	0.00[b]
3. Flexible Hours	224	1.74	2,3	0.61	33	1.85	2,3	0.68	187	1.71	2,3	0.38

F. Ratio = 10.03 Probability = 0.00 F. Ratio = 1.51 Probability = 0.23 F. Ratio = 26.33 Probability = 0.00

[b] Significant at .01 level.

Thus the innovative non-management group was more satisfied with the administration of their program by supervisors in their respective branches.

(6) Travel Arrangements To and From Work

Total Personnel. The probability level of 0.0 for the obtained F ratio indicated that at least one pair of means were significantly different.

Further examination of Table 25 showed that the Standard Hours mean of 2.12 was significantly higher than both the Compressed Hours mean, 1.40 and the Flextime mean of 1.60 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that variances were not homogeneous at the .05 level of significance.

Thus both innovative groups were significantly more satisfied with their travel arrangements to and from work.

Management. Table 25 showed that no significant differences were obtained among the mean scores for management on this item.

Non-Management. The probability level of 0.0 for the obtained F ratio, showed there was at least one pair of means for which significant differences were obtained. (See Table 25). The Standard Hours mean of 2.39 was significantly

Table 25

Scheffe Analysis of Variance for Job Satisfaction

6. Travel Arrangements to and from Work

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.12	1,2	0.00^b	57	1.63	1,2	0.76	72	2.39	1,2	0.00^b
2. Compressed Hours	37	1.40	1,3	0.00^b	5	2.20	1,3	0.84	31	1.39	1,3	0.00^b
3. Flexible Hours	225	1.60	2,3	0.43	33	1.85	2,3	0.90	187	1.59	2,3	0.47

F. Ratio = 18.68 Probability = 0.00   F. Ratio = 1.51 Probability = 0.22   F. Ratio = 27.24 Probability = 0.00

b Significant at .01 level.

higher than both the Compressed Hours mean, 1.39 and the Flextime mean of 1.59, at the 0.00 probability level. It should be noted that the obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance. Thus the two innovative groups were more satisfied with their travel arrangements to and from work than the Standard Hours group.

(7) Freedom to Handle Personal Business During the Workday

Total Personnel. The information presented in Table 26 disclosed that the obtained F ratio had a probability of 0.0 indicating a significant difference between at least one pair of means.

It was found that the Standard Hours mean 3.03 was significantly higher than both the Compressed Hours mean 1.75 and the Flextime mean of 1.68 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance.

Thus the innovative groups had more freedom to handle personal business during the workday, than the Standard Hours group.

Management. Further examination of Table 26 revealed that the obtained F ratio had an associated probability of

Table 26

Scheffe Analysis of Variance for Job Satisfaction

7. Freedom to Handle Personal Business During the Workday

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	3.03	1,2	0.00[b]	57	2.58	1,2	0.93	72	3.41	1,2	0.00[b]
2. Compressed Hours	36	1.75	1,3	0.00[b]	5	2.40	1,3	0.00[b]	31	1.65	1,3	0.00[b]
3. Flexible Hours	226	1.68	2,3	0.93	34	1.74	2,3	0.36	188	1.67	2,3	0.99

F. Ratio = 91.07 Probability = 0.00   F. Ratio = 8.08 Probability = 0.00   F. Ratio =108.55 Probability = 0.00

[b] Significant at .01 level.

0.00, and thus at least one pair of means was significantly different. It was found that the Flexible Hours mean 1.74 was significantly lower than the Standard Hours mean, 2.58 at the 0.00 probability level. Thus Flextime management perceived themselves as having more freedom to handle personal business during the day from Standard Hours managers.

Non-Management. Table 26 showed that the F ratio had an associated probability of 0.0. Further examination revealed that the Standard Hours mean 3.41 was significantly higher than the Compressed Hours mean, 1.65 and the Flextime mean of 1.67 at the 0.0 probability level. The obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance.

Summary. Thus, the findings disclosed that for the variables related to Individual Autonomy a number of significant differences were obtained among the non-management personnel. Alternatively, there was a fairly high level of consensus among management personnel except for (7) Freedom to handle business during the workday where the Flextime management were more satisfied, than the other groups.

C. - Other Variables

The following variables did not load on either Factor A or Factor B at the .4 level of significance.

(8) Utilization of the Bus Service

Total Personnel. An examination of Table 27 disclosed that the obtained F ratio had an associated probability of 0.00. This indicated that there was a significant difference between at least one pair of means.

Further investigation revealed that the Standard Hours mean, 2.12 was significantly higher than both the Compressed Hours mean 1.40 and the Flexible Hours mean of 1.60 at the .01 probability level. Thuse both innovative groups were more satisfied with their use of the bus system.

Management. The obtained F ratio had an associated probability of 0.97 indicating no significant differences among the means for these groups on this item. These findings are presented in Table 27.

Non-Management. Table 27 showed the F ratio had an associated probability of 0.00 indicating a significant difference between at least one pair of means. The mean for standard hours, 3.05 was significantly higher than both the means for the Compressed Hours group, 2.56 and the Flexible hours group of 2.50 at the 0.00 probability level.

Thus non-management personnel in the innovative

Table 27

Scheffe Analysis of Variance for Job Satisfaction

8. Utilization of Bus Service

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	132	2.97	1,2	0.01^b	55	2.87	1,2	0.99	65	3.05	1,2	0.00^b
2. Compressed Hours	32	2.34	1,3	0.00^b	5	2.80	1,3	0.99	27	2.56	1,3	0.00^b
3. Flexible Hours	189	2.57	2,3	0.49	29	2.90	2,3	0.96	157	2.50	2,3	0.53

F. Ratio = 8.44 Probability = 0.00 F. Ratio = 0.03 Probability = 0.97 F. Ratio = 8.66 Probability = 0.00

b Significant at .01 level.

groups were more satisfied with their utilization of the service provided by the bus system.

(9) Changes Which have Occurred in the Way Work is Done

Total Personnel. The probability level of 0.0 for the obtained F ratio indicated that at least one significant difference occurred between the pairs of means for these three groups.

Further examination of Table 28 disclosed that the Standard Hours mean 2.46 was significantly higher than the mean for both the Compressed Hours group 1.63 and the Flextime mean, 2.09 at the 0.00 probability level.

However the Compressed Hours mean, 1.63 was also significantly lower than the Flextime mean of 2.09 at the 0.01 probability level.

Thus the Compressed workweek group was the most satisfied with changes which have occurred in the way work is done since adopting their innovation in the management of time. However, the Flextime group was more satisfied than the Standard Hours group.

Management. Table 28 showed that no significant differences were obtained between these group means as the obtained F ratio had an associated probability of 0.32.

Table 28

Scheffe Analysis of Variance for Job Satisfaction

9. Changes Which Have Occurred in Way Work is Done

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	131	2.46	1,2	0.00^b	57	2.35	1,2	0.33	71	2.54	1,2	0.00^b
2. Compressed Hours	35	1.63	1,3	0.00^b	5	1.80	1,3	0.90	30	1.60	1,3	0.00^b
3. Flexible Hours	218	2.09	2,3	0.01^b	33	2.27	2,3	0.46	182	2.06	2,3	0.17

F. Ratio = 17.47 Probability = 0.00 F. Ratio = 1.16 Probability = 0.32 F. Ratio = 16.21 Probability = 0.00

b Significant at .01 level.

Non-Management. In examination of Table 28 disclosed that the F ratio had an associated probability of 0.00. This indicated that at least one pair of means was significantly different. Further analysis showed that the Standard Hours mean of 2.54 was significantly higher than both the Compressed Hours mean, 1.60 and the Flextime mean, 2.06 at the 0.00 probability level.

Thus both the innovative groups tended to be more satisfied concerning changes which had occurred in the way work was done in their respective branches.

(10) Completion and Organization of Work

Total Personnel. The information presented in Table 29 showed the obtained F ratio had an associated probability of 0.00.

Further examination showed that the Standard Hours mean, 2.01 was significantly higher than both the Compressed Hours mean, 1.55 and the Flexible Hours mean, 1.72 at the 0.00 probability level. The homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance.

Thus the innovative groups were more satisfied with the way they organized and completed their work in their branches.

Table 29

Scheffe Analysis of Variance for Job Satisfaction

10. The Way You Now Complete and Organize Your Work

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	131	2.01	1,2	0.00^b	57	1.95	1,2	0.93	71	2.07	1,2	0.00^b
2. Compressed Hours	36	1.55	1,3	0.00^b	5	1.80	1,3	0.86	31	1.52	1,3	0.00
3. Flexible Hours	224	1.72	2,3	0.40	34	1.85	2,3	0.99	186	1.69	2,3	0.36

F. Ratio = 10.18 Probability = 0.00   F. Ratio = 0.19 Probability = 0.82   F. Ratio = 11.67 Probability = 0.00

b Significant at the .01 level.

Management. Table 29 showed that the obtained F ratio had an associated probability of 0.82 and thus no significant differences between mean scores were obtained.

Non-Management. Further analysis of Table 29 showed that a probability of 0.00 was associated with the obtained F ratio. Thus the Standard Hours mean of 2.07 was significantly higher than both the Compressed Hours mean, 1.52 and the Flexible Hours mean of 1.69 at the 0.00 probability level. However, the obtained homogeneity of variance chi-square indicated that at the .05 significance level the variance was not homogeneous.

Thus the two innovative groups were more satisfied with the way they now complete and organize their work.

Summary. The information contained in Table 30 presented a summary of the significant differences between the obtained mean scores for standard, compressed and Flexible Hours groups as determined by the Scheffe Multiple Comparison of Means Test.

An examination of Table 30 revealed that the two groups involved in innovations in the management of time tended to be more satisfied with all dimensions of job satisfaction included in this study, than Standard Hours personnel. However, the management group, with the exception of one case, did not perceive any significant differences

Table 30

Summary of Differences Between Pairs of Group Means for Job Satisfaction

	Total Personnel	Management	Non-Management
Factor A. Schedule Monitoring			
1. The over-all program in your department	S/C[a], S/F[a]	-	S/C[a], S/F[a]
2. The way in which the program is organized	S/C[a], S/F[a]	-	S/C[a], S/F[a]
3. The method of keeping track of the hours worked each day	S/C[a], S/F[a]	-	S/C[a], S/F[a]
Factor B. Individual Autonomy			
4. The freedom you have to decide when you will arrive and depart from work	S/C[a], S/F[a]	-	S/C[a], S/F[a]
5. The way your immediate supervisor is administering the program	S/C[a], S/F[a]	-	S/C[a], S/F[a]
6. The arrangements you have for travel to and from work	S/C[a], S/F[a]	--	S/C[a], S/F[a]
7. Freedom to handle personal business during the workday	S/C[a], S/F[a]	-	S/C[a], S/F[a]
C. Additional Variables			
8. Your utilization of the service provided by the bus system	S/C[a], S/F[a]	-	S/C[a], S/F[a]
9. Changes which have occurred in the way work is done	S/C[a],S/F[a],F/C[a]	-	S/C[a], S/F[a]
10. The way you now organize and complete your work	S/C[a], S/F[a]	-	S/C[a], S/F[a]

[a] Lowest Mean = Most satisfied

S = Standard Hours, C = Compressed Hours, F = Flexible Hours

NB. All differences significant at .05 level.

relating to the aspects of job satisfaction measured in this study.

Alternatively, the non-management groups, perceived significant differences for all items relating to job satisfaction measured in this study. In all cases the two innovative groups indicated higher job satisfaction than the Standard Hours group.

PERCEPTIONS CONCERNING ORGANIZATIONAL PERFORMANCE AND WORK WEEK STRUCTURES

The third phase of the empirical analysis examined a statistical comparison of the mean responses for aspects of organizational performance, as determined by each group of respondents. Again, a one way analysis of variance procedure using Scheffe Multiple Comparison of Means was used to determine significant differences among groups of respondents. Two aspects of perceptions for each variable relating to organizational performance were examined: (1) The nature of any change that has occurred and (2) The importance of any change that has occurred.

Analysis of Variance - Organizational Performance

Appendix G presents a factor analysis of the variables included in this section of the study on perceptions of organizational performance and various workweek structures. A four factor solution was derived and this was used to provide a framework for the following analysis.

Factor A - Organizational Communication

1. Availability of Personnel with Whom You Work

Total Personnel. The probability of 0.27 associated with the obtained F ratio indicated that there were no significant differences in mean scores among all groups on this item, regarding the direction of the change.

However Table 31 disclosed that although all groups indicated that availability of personnel was much the same as before the Flexible Hours mean of 1.91, was significantly lower than the Standard Hours mean of 2.07 at the 0.02 probability level. This indicated that the Flextime group perceived availability of personnel as a more important issue than did the Standard Hours group.

Management. Further examination of Table 31 disclosed that for perceptions concerning the direction of change the Standard Hours mean 1.91 was significantly lower than the Compressed Hours mean of 2.67 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance for both aspects of this item. Thus availability of personnel was seen as less of a problem for the Standard Hours management group, whereas the

Table 31

Scheffe Analysis of Variance for Changes in Organizational Performance

1. Availability of Personnel with Whom You Must Work

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	125	1.99	1,2	0.27	57	1.91	1,2	0.00[b]	65	2.08	1,2	0.90
2. Compressed Hours	37	2.14	1,3	0.79	6	2.67	1,3	0.08	31	2.03	1,3	0.46
3. Flexible Hours	211	2.03	2,3	0.45	34	2.15	2,3	0.06	173	1.99	2,3	0.91
	F. Ratio = 1.30		Probability = 0.27		F. Ratio = 7.80		Probability = 0.00		F. Ratio = 0.80		Probability = 0.45	

b Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	117	2.07	1,2	0.87	56	2.07	1,2	0.87	58	2.09	1,2	0.99
2. Compressed Hours	35	2.11	1,3	0.02[a]	6	2.17	1,3	0.06[c]	29	2.10	1,3	0.09[c]
3. Flexible Hours	195	1.91	2,3	0.06	33	1.85	2,3	0.25	159	1.93	2,3	0.19
	F. Ratio = 5.73		Probability = 0.00		F. Ratio = 3.31		Probability = 0.04		F. Ratio = 3.33		Probability = 0.04	

a Significant at .05 level.
c Significant at .10 level.

Compressed Hours management group indicate a deterioration in this factor.

Furthermore, the probability level of 0.04 associated with the obtained F ratio concerning the importance of the change indicated a significant difference between at least one pair of means. The mean score for the Standard Hours group, 2.07 was significantly higher than the Flextime mean of 1.85 at the 0.06 probability level. Thus although both of these groups indicated little change in this item, this lack of change was perceived as more importand by the Flextime management group.

Non-Management. Table 31 showed that the obtained F ratio had an associated probability of 0.45, indicating no significant differences among groups concerning their perceptions of the direction of change in this item, as all non-management groups perceived little change.

However, there was some difference concerning perceptions of the importance of this lack of change. The obtained F ratio had an associated probability of 0.04 indicating a significant difference between at least one pair of means. Further examination revealed that the Standard Hours mean 2.09 was significantly higher than the Flextime mean of 1.93 at the 0.09 probability level. Thus the Flextime group considered this lack of change to be more important from the Standard Hours group.

2. Degree of Participation in Decisions About Work Assignments

Total Personnel. Table 32 indicated that no significant differences were obtained concerning perceptions of the direction of the change, among these three groups. The F ratio had an associated probability of 0.65. Furthermore, there were no significant differences concerning perceptions of the importance of the change. The obtained F ratio had an associated probability of 0.34.

Management. Similarly, Table 32 showed one significant differences among management means regarding the nature of any changes in this item. The obtained F ratio had an associated probability of 0.04. The Standard Hours mean 1.98 was significantly higher than the Flextime mean of 1.76, at the 0.04 probability level. Thus the Flextime group indicated a more significant change towards greater participation in decisions about work assignments.

However, concerning the importance of any change, their was no significant differences among the management means. The F ratio had an associated probability of 0.96.

Non-Management. A further examination of Table 32 indicated that there were no significant differences among non management means for the direction of changes related to this item. The obtained F ratio had an associated

Table 32

Scheffe Analysis of Variance for Changes in Organizational Performance

[illegible]. Degree of Participation in Decisions About Work Assignments

DIRECTION OF THE CHANGE

Group	Total Personnel N	Total Personnel Mean	Total Personnel Pairs of Groups	Total Personnel Probability	Management N	Management Mean	Management Pairs of Groups	Management Probability	Non Management N	Non Management Mean	Non Management Pairs of Groups	Non Management Probability
1. Standard Hours	125	1.94	1,2	0.16	57	1.98	1,2	1.00	65	1.89	1,2	0.31
2. Compressed Hours	37	1.78	1,3	0.15	6	2.00	1,3	0.04[a]	31	1.74	1,3	0.84
3. Flexible Hours	207	1.85	2,3	0.74	33	1.76	2,3	0.40	170	1.85	2,3	0.45
	F. Ratio = [illegible]	Probability = 0.65			F. Ratio = 3.44	Probability = 0.04			F. Ratio = 1.18	Probability = 0.31		

a Significant at .05 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel N	Total Personnel Mean	Total Personnel Pairs of Groups	Total Personnel Probability	Management N	Management Mean	Management Pairs of Groups	Management Probability	Non Management N	Non Management Mean	Non Management Pairs of Groups	Non Management Probability
1. Standard Hours	118	2.03	1,2	0.35	57	2.05	1,2	0.97	58	2.02	1,2	0.24
2. Compressed Hours	34	2.18	1,3	0.96	6	2.00	1,3	0.98	28	2.21	1,3	0.35
3. Flexible Hours	197	2.05	2,3	0.41	33	2.03	2,3	0.99	161	2.06	2,3	0.35
	F. Ratio = 1.09	Probability = 0.34			F. Ratio = 0.04	Probability = 0.96			F. Ratio = 1.46	Probability = 0.23		

probability of 0.31. Similarly, the probability of 0.23 associated with the F ratio for means related to the importance of the change as perceived by these groups, indicated no significant differences.

3. Degree of Difficulty in Scheduling Work Requiring Others

Total Personnel. Table 33 showed that the F ratio had an associated probability of 0.01, indicating at least one pair of means for the nature of changes in this item were significantly different. Further examination disclosed that the Standard Hours mean, 2.09 was significantly higher than the Flextime mean of 1.95 at the 0.04 probability level. The obtained homogeneity of variance chi square indicated that the variance was not homogeneous at the .05 level of significance for this item. This also applied to mean scores related to the importance of changes for this item. Thus, the Flextime group indicated more significant improvement in thisitem than the Standard Hours group.

Management. Further examination of Table 33 disclosed that no significant differences were found among namagement means focusing upon the nature of changes in this item. The obtained F ratio had an associated probability of 0.34. Similarily, no significant differences were found among management means concerned with the importance of changes in this item. A probability level of 0.58 was

Table 33

Scheffe Analysis of Variance for Changes in Organizational Performance

3. Degree of Difficulty in Scheduling Work Requiring Others

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	122	2.09	1,2	0.97	57	2.11	1,2	0.45	62	2.08	1,2	0.99
2. Compressed Hours	36	2.11	1,3	0.04[a]	6	2.33	1,3	0.88	30	2.07	1,3	0.07[c]
3. Flexible Hours	205	1.95	2,3	0.17	34	2.06	2,3	0.34	167	1.92	2,3	0.29
	F. Ratio = 9.46		Probability = 0.01		F. Ratio = 1.09		Probability = 0.34		F. Ratio = 3.28		Probability = 0.04	

[a] Significant at .05 level.
[c] Significant at .10 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	119	1.89	1,2	0.79	56	1.96	1,2	0.79	60	1.82	1,2	1.00
2. Compressed Hours	33	1.82	1,3	0.06	6	1.83	1,3	0.67	27	1.82	1,3	0.47
3. Flexible Hours	192	1.74	2,3	0.75	32	1.88	2,3	0.98	157	1.71	2,3	0.68
	F. Ratio = 2.79		Probability = 0.06		F. Ratio = 0.54		Probability = 0.58		F. Ratio = 0.96		Probability = 0.38	

associated with the obtained F ratio.

Non Management. The probability level of 0.04 for the obtained F ratio, indicated at least one pair of means were significantly different. The Standard Hours mean, 2.08 was significantly higher than the Flextime mean of 1.92 at the 0.07 probability level. Thus the Flextime group indicated a slight improvement, whereas the Standard Hours group indicated a slight deterioration in the degree of difficulty in scheduling work requiring others.

Further examination of Table 33 revealed that these groups perceived no significant differences in the importance of the change. The obtained F ratio had an associated probability of 0.38.

4. Quality of Communication about Work Assignments

Total Personnel. The obtained F ratio had an associated probability of 0.13 indicatiang no significant differences in the mean scores for ther groups concerning the nature of changes in this item.

Furthermore, Table 34 revealed that there was no significant differences in mean scores relating to the importance of any change in this item. The probability of 0.07 associated with the F ratio indicated this conclusion.

Management. Further examination of Table 34 revealed

Table 34

Sceffe Analysis of Variance for Changes in Organizational Performance

4. Quality of Communication about Work Assignments

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	125	1.98	1,2	0.38	57	1.97	1,2	0.98	65	1.99	1,2	0.29
2. Compressed Hours	37	1.87	1,3	0.17	6	2.00	1,3	0.97	31	1.84	1,3	0.16
3. Flexible Hours	209	1.89	2,3	0.97	34	1.94	2,3	0.96	171	1.87	2,3	0.95
	F. Ratio = 2.06		Probability = 0.13		F. Ratio = 0.06		Probability = 0.94		F. Ratio = 2.15		Probability = 0.12	

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	119	1.97	1,2	0.69	56	1.96	1,2	0.98	60	1.97	1,2	0.68
2. Compressed Hours	34	1.88	1,3	0.07	6	2.00	1,3	0.44	28	1.86	1,3	0.23
3. Flexible Hours	196	1.83	2,3	0.86	32	1.84	2,3	0.71	161	1.83	2,3	0.96
	F. Ratio = 2.62		Probability = 0.07		F. Ratio = 0.93		Probability = 0.40		F. Ratio = 1.47		Probability = 0.23	

that there were no significant differences in mean scores for this group on this item, regarding the direction of any changes. The F ratio had an associated probability of 0.94.

Furthermore, all management groups perceived no significant differences in the importance of any changes relating to this item. A probability of 0.40 was associated with the F ratio.

Non-Management. Table 34 disclosed that the F ratio had an associated probability of 0.12 and therefore none of the means on this item were significantly different. All groups perceived very little change in this item.

Furthermore, concerning the importance of any change, again the F ratio had an associated probability of 0.23 indicating that none of the means were significantly different.

5. Ability to Arrange Meetings with Others when Necessary

Total Personnel. Table 35 showed that there was a probability of 0.01 associated with the F ratio, and therefore at least one pair of means was significantly different concerning perceptions of the direction of any changes in this item. The mean for the standard hour group 2.06, was significantly higher than the Flextime mean of 1.91 at the 0.02 probability level.

Table 35

Scheffe Analysis of Variance for Changes in Organizational Performance

5. Ability to Arrange Meetings With Others When Necessary

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	2.06	1,2	0.95	57	2.05	1,2	0.33	64	2.08	1,2	0.50
2. Compressed Hours	34	2.03	1,3	0.02[a]	6	2.33	1,3	0.20	28	1.96	1,3	0.03[a]
3. Flexible Hours	207	1.91	2,3	0.36	34	1.88	2,3	0.07[c]	169	1.91	2,3	0.30
	F. Ratio = 4.44		Probability = 0.01		F. Ratio = 3.41		Probability = 0.04		F. Ratio = 3.73		Probability = 0.03	

[a] Significant at .05 level.
[c] Significant at .10 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	117	1.98	1,2	0.98	56	1.96	1,2	0.26	58	2.00	1,2	0.79
2. Compressed Hours	34	2.00	1,3	0.56	6	1.67	1,3	1.00	28	2.07	1,3	0.50
3. Flexible Hours	192	1.93	2,3	0.68	33	1.97	2,3	0.27	156	1.92	2,3	0.26
	F. Ratio = 0.78		Probability = 0.46		F. Ratio = 1.43		Probability = 0.24		F. Ratio = 1.74		Probability = 0.18	

However, although the Flextime group indicated some significant improvement in this item, all groups indicated no significant differences in their perceptions of the importance of any change. Table 31 showed the obtained F ratio had an associated probability of 0.46.

Management. Further examination of Table 35 revealed that there were at least one pair of means that were significantly different, because the obtained F ratio had an associated probability of 0.04. It is interesting to note that the compressed workweek mean of 2.33 was significantly higher than the Flextime mean of 1.88 at the 0.07 probability level. Thus, the Compressed Hours management perceived some deterioration in this item, whereas Flextime management perceived some improvement.

However, further examination of Table 35 revealed that there were no significant differences in perceptions of the importance of these changes, as the F ratio had an associated probability of 0.24.

Non-Management. The information presented in Table 35 disclosed that at least one pair of means was significantly different as the F ratio had an associated probability of Thus Flextime non-management personnel perceived some significant improvement 0.03. Thus concerning the direction of change, the Standard Hours mean, 2.08 was significantly higher than the Flextime mean of 1.91 at 0.03 probability level for this item.

However, there were no significant differences in group means relating to perceptions of the importance of any change in this item. A probability level of 0.18 was associated with the obtained F ratio.

6. Availability of Others for 'Spur of the Moment' Discussions or Phone calls

Total Personnel. Table 36 disclosed that the F ratio had an associated probability of 0.31 and therefore none of the means on this item were significantly different. All groups perceived some slight deterioration in this item.

In addition, there were no significant differences among mean scores related to the importance of this change. Table 33 showed the F ratio had an associated probability of 0.08.

Management. Further examination of Table 36 disclosed that at least one pair of management mean scores was significantly different because the F ratio had an associated probability of 0.00. The Standard Hours mean, 2.05 was significantly lower than the Compressed Hours mean of 2.83 at the 0.00 probability level. Furthermore, the Compressed Hours mean 2.83 was significantly higher than the

Table 36

Scheffe Analysis of Variance for Changes in Organizational Performance

6. Availability of Others for 'Spur of the Moment' Discussions or Phone Calls

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	2.06	1,2	0.32	57	2.05	1,2	0.00[b]	64	2.06	1,2	1.00
2. Compressed Hours	36	2.19	1,3	0.72	6	2.83	1,3	1.00	30	2.07	1,3	0.87
3. Flexible Hours	209	2.10	2,3	0.56	34	2.06	2,3	0.00[b]	170	2.10	2,3	0.94

F. Ratio = 1.17 Probability = 0.31 F. Ratio = 8.20 Probability = 0.00 F. Ratio = 0.17 Probability = 0.84

[b] Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	1.94	1,2	0.85	56	1.89	1,2	0.51	61	2.00	1,2	0.86
2. Compressed Hours	35	2.00	1,3	0.20	6	1.67	1,3	0.91	29	2.07	1,3	0.07[c]
3. Flexible Hours[a]	196	1.83	2,3	0.21	32	1.94	2,3	0.41	161	1.81	2,3	0.06[c]

F. Ratio = 2.55 Probability = 0.08 F. Ratio = 0.91 Probability = 0.41 F. Ratio = 4.56 Probability = 0.01

[c] Significant at .10 level.

Flextime mean of 2.06 at the 0.00 probability level. Thus the compressed hours management perceived more significant deterioration in this item in their branch, than the other management groups.

However, further examination of Table 36 revealed that there were no significant differences among mean scores related to the importance of this change. The obtained F ratio had an associated probability of 0.41. All groups tended to perceive any change in this item to be of major importance.

Non-Management. Table 36 disclosed that there were no significant differences among non-management means on this item. The F ratio had an associated probability of 0.84.

However, there was some disagreement concerning the importance of any perceived change in this item. The F ratio had an associated probability of 0.01. Thus it was found that the Flextime mean, 1.81 was significantly lower than the Standard Hours mean at the 0.07 probability level. Also, the Flextime mean, 1.81 was significantly lower from the Compressed Hours mean of 2.07 at the 0.07 probability level. The homogeneity of variance chi-square for this item indicated that the variances were not homogeneous at the .05 level of significance. Thus the Flextime non-management group perceived any change in this item to be more important than the other groups.

Summary. It was found that for 4 of these 6 variables included in factor 'Organizational Communication' at least one pair of management means were significantly different concerning the direction of changes in this factor.

However, significant differences were obtained among only 2 of these 6 variables within the non-management group.

Thus the management personnel indicated a greater awareness of the impact of the allocation of time upon changes in organizational communication.

On the other hand, concerning the importance of changes in Organizational Communication, the management group only disagreed on the importance of changes for one variable, and the non-management group indicated significant differences for two variables.

Thus there was a fairly high degree of consensus concerning the importance of any changes in 'Organizational Communication.'

Factor B - Work Scheduling

7. Organization of Work

Total Personnel. Table 37 showed that the F ratio had an associated probability of 0.00 and therefore at least

Table 37

Scheffe Analysis of Variance for Changes in Organizational Performance

7. Organization of Work

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	1.89	1,2	0.22	57	1.91	1,2	0.92	64	1.86	1,2	0.36
2. Compressed Hours	36	1.72	1,3	0.00^b	6	1.83	1,3	0.33	30	1.70	1,3	0.00^b
3. Flexible Hours	212	1.63	2,3	0.60	34	1.76	2,3	0.94	174	1.59	2,3	0.52

F. Ratio = 10.32 Probability = 0.00 F. Ratio = 1.12 Probability = 0.33 F. Ratio = 7.07 Probability = 0.00

b Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	1.96	1,2	0.68	57	1.98	1,2	1.00	60	1.92	1,2	0.85
2. Compressed Hours	34	1.88	1,3	1.00	6	2.00	1,3	0.19	28	1.86	1,3	0.92
3. Flexible Hours	197	1.88	2,3	0.10	32	1.81	2,3	0.60	162	1.89	2,3	0.95

F. Ratio = 1.25 Probability = 0.29 F. Ratio = 1.82 Probability = 0.17 F. Ratio = 0.17 Probability = 0.84

one pair of means focusing on the direction of change in this item was significantly different. Further examination revealed that the Flextime mean 1.63 was significantly lower than the Standard Hours mean of 1.89 at the 0.00 probability level. Thus the Flextime group noted considerable improvement in the organization of their work.

However, further examination of Table 37 disclosed no significant differences among the means related to the importance of this change. The obtained F ratio had an associated probability of 0.29.

Management. Further examination of Table 37 showed no significant differences between mean scores on this item. A probability of 0.33 was associated with the obtained F ratio, for mean scores focusing on the direction of change.

Similarly, there were no significant differences in means related to the importance of any change, as the F ratio had an associated probability of 0.17.

Non-Management. Further examination of Table 37 disclosed that at least one pair of means was significantly different because the obtained F ratio had an associated probability of 0.00. The Flextime mean, 1.59 was significantly lower than the Standard Hours mean of 1.86 at the 0.00 probability level. Thus the Flextime non-management personnel perceived a significant improvement in the organization of their work.

However, no significant differences concerning the importance of any changes were reported, as The F ratio had an associated probability of 0.84.

8. Availability of Office Equipment

Total Personnel. Table 38 disclosed that there were no significant differences among the mean scores, concerning the direction of changes in this item. The F ratio had an associated probability of 0.38. Furthermore, no significant differences were found among mean scores related To the importance of this item, as here there was a probability of 0.06 associated with the obtained F ratio.

Management. Further examination of Table 38 revealed that there were no significant differences among the mean scores, relating to direction of changes in this item. The F ratio had an associated probability of 0.85.

In addition, there were no significant differences among mean scores relating to the importance of changes for this item. The F ratio had an associated probability of 0.73.

Non-Management. Table 38 also disclosed that there were no significant differences among non management means relating to the nature of changes in this item. Their was a

Table 38

Scheffe Analysis of Variance for Changes in Organizational Performance

8. Availability of Office Equipment

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	1.93	1,2	0.58	57	1.93	1,2	0.86	64	1.95	1,2	0.35
2. Compressed Hours	36	1.87	1,3	0.47	6	1.83	1,3	0.98	31	1.84	1,3	0.34
3. Flexible Hours	207	1.88	2,3	0.96	34	1.91	2,3	0.91	169	1.88	2,3	0.87
	F. Ratio = 0.95		Probability = 0.38		F. Ratio = 0.16		Probability = 0.85		F. Ratio = 1.45		Probability = 0.24	

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	116	2.04	1,2	0.74	56	2.04	1,2	0.80	57	2.05	1,2	0.90
2. Compressed Hours	35	2.11	1,3	0.20	6	2.17	1,3	0.86	29	2.10	1,3	0.19
3. Flexible Hours	195	1.94	2,3	0.14	33	2.09	2,3	0.93	159	1.91	2,3	0.16
	F. Ratio = 2.86		Probability = 0.06		F. Ratio = 0.31		Probability = 0.73		F. Ratio = 2.90		Probability = 0.06	

probability level of 0.24 associated with the F ratio.

Similarly, there were no significant differences among mean scores related to changes in the importance of this item, as the F ratio had as associated probability of 0.06.

9. Desirability of the Branch as a Place to Work

Total Personnel. The information presented in Table 39 indicated that at least one pair of mean scores were significantly different concerning perceptions related to the direction of changes in this item. The obtained F ratio had an associated probability of 0.0. The Standard Hours mean 2.06, was significantly higher than the Compressed Hours mean of 1.68 at the 0.00 probability level. Furthermore, the Standard Hours mean, 2.06 was significantly higher than the Flextime mean of 1.61 at the 0.0 probability level. Thus the two innovative groups perceived their worksites more positively as a desirable place to work, whereas the Standard Hours group indicated a slight deterioration.

However, this change was not perceived as significantly different in importance among the three groups, as the obtained F ratio had an associated probability of 0.13.

Table 39

Scheffe Analysis of Variance for Changes in Organizational Performance

9. Desirability of Branch as a Place to Work

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	2.06	1,2	0.00[b]	57	2.07	1,2	0.08	64	2.03	1,2	0.02[a]
2. Compressed Hours	34	1.68	1,3	0.00[b]	6	1.67	1,3	0.00[b]	28	1.68	1,3	0.00[b]
3. Flexible Hours	201	1.61	2,3	0.79	33	1.70	2,3	0.99	164	1.59	2,3	0.70
	F. Ratio = 30.05 Probability = 0.00				F. Ratio = 9.61 Probability = 0.00				F. Ratio = 15.72 Probability = 0.00			

a Significant at .05 level.
b Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	117	2.01	1,2	0.88	56	1.98	1,2	0.63	58	2.02	1,2	0.91
2. Compressed Hours	34	2.06	1,3	0.26	6	1.83	1,3	0.98	28	2.07	1,3	0.34
3. Flexible Hours	194	1.91	2,3	0.29	33	2.00	2,3	0.58	159	1.89	2,3	0.29
	F. Ratio = 2.07 Probability = 0.13				F. Ratio = 0.55 Probability = 0.58				F. Ratio = 1.92 Probability = 0.15			

Management. Table 39 showed the obtained F ratio had an associated probability of 0.00 indicating that at least one pair of means perceived significant differences in the direction of change for this item. The Flextime mean 1.70 was significantly lower than the Standard Hours mean of 2.07 at the 0.00 probability level.

However, although the Flextime group indicated a possible improvement in the desirability of the worksites, there were no significant differences found among the groups concerning the importance of this change. The obtained F ratio had an associated probability of 0.58.

Non-Management. Further examination of Table 39 disclosed that at least one pair of means were significantly different, concerning the direction of change in this item because there was a probability level of 0.00 associated with the obtained F ratio. It was found that the Standard Hours mean, 2.03 was significantly higher than the Compressed Hours mean of 1.68 at the 0.02 probability level. Also, the Standard Hours mean, 2.03 was significantly higher than the Flextime mean of 1.59 at the 0.00 probability level. Thus both of the innovative groups perceived their branches as more desirable worksites than the Standard Hours group.

However, Table 39 showed that there was no significant differences among the groups concerning their perceived importance of this change. The obtained F ratio had an associated probability of 0.15.

10. Degree of Fatigue Associated with Work Assignments

Total Personnel. The information presented in Table 40 showed that there were at least one pair of means that was significantly different concerning perceptions of the direction of change in this item. The obtained F ratio had an associated probability of 0.0. The Flextime mean of 1.74 was significantly lower than the Standard Hours mean of 2.07 at the 0.0 probability level. The obtained homogeneity of variance chi-square indicated that the variances for this item were not homogeneous at the 0.5 level of significance.

Further examination of Table 40 revealed that there was a probability level of 0.00 associated with the obtained F ratio indicating at least one pair of means was significantly different. The Standard Hours mean 2.04 was significantly higher than both the compressed hours mean 1.46 and the Flextime mean of 1.46 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance.

Thus the innovative groups considered any change in the level of work fatigue to be an important change in factors associated with work scheduling.

Table 40

Scheffe Analysis of Variance for Changes in Organizational Performance

10. Degree of Fatigue Associated With Work Assignments

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	2.07	1,2	0.14	57	2.11	1,2	0.30	64	2.05	1,2	0.29
2. Compressed Hours	37	1.89	1,3	0.00[b]	6	1.83	1,3	0.05[a]	31	1.87	1,3	0.00[b]
3. Flexible Hours	206	1.74	2,3	0.23	33	1.88	2,3	0.97	169	1.70	2,3	0.25

F. Ratio = 18.02 Probability = 0.00 F. Ratio = 3.76 Probability = 0.03 F. Ratio = 10.81 Probability = 0.00

[a] Significant at .05 level.
[b] Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	2.04	1,2	0.00[b]	57	2.09	1,2	0.00[b]	61	1.98	1,2	0.00[b]
2. Compressed Hours	37	1.46	1,3	0.00[b]	6	1.33	1,3	0.00[b]	31	1.48	1,3	0.00[b]
3. Flexible Hours	207	1.46	2,3	1.00	34	1.77	2,3	0.07	170	1.39	2,3	0.60

F. Ratio = 59.11 Probability = 0.00 F. Ratio = 13.16 Probability = 0.00 F. Ratio = 33.94 Probability = 0.00

[b] Significant at .01 level.

Management. Table 40 showed the F ratio had an associated probability of 0.03 indicating at least one pair of means was significantly different, concerning the nature of change in this item. It was found that the Standard Hours mean 2.11 was significantly higher than the Flextime mean of 1.88 at the 0.05 probability level. Thus the Flextime group perceived a significant improvement in the amount of fatigue associated with work assignment whereas the standard hour managers reported some deterioration.

Furthermore, the probability level of 0.00 associated with the F ratio concerning the importance of any change in work fatigue showed some significant differences among the group means. The Standard Hours mean, 2.09 was significantly higher than both the compressed hours mean, 1.33 and the Flextime mean 1.77 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the variance was not homogeneous at the .05 level of significance. Thus the innovative group perceived any change in the level of worker fatigue to be of major importance, whereas for the Standard Hours group it was less important.

Non-Management. In addition Table 40 showed that at least one pair of means was significantly different because the obtained F ratio had an associated probability of 0.00. The Flextime mean, 1.70 was significantly lower than the

Standard Hours mean of 2.05 at the 0.00 probability level. Thus fatigue levels were perceived as improving for the Flextime group, and deteriorating slightly for the Standard Hours group.

Furthermore, concerning the importance of changes in the level of fatigue Table 40 showed that at least one pair of means was significantly different because the obtained F ratio had an associated probability of 0.0. It was found that the Standard Hours mean of 1.98 was significantly higher than both the flestime mean 1.39 and the Compressed Hours mean 1.48 at the 0.00 probability level. Thus the innovative groups perceived change in fatigue to be more important than the Standard Hours group.

11. Travel to and from Work

Total Personnel. An examination of Table 41 disclosed that the obtained F ratio had an associated probability of 0.0, and thus at least one pair of means were significantly different. Further examination showed that the Standard Hours mean, 2.07 was significantly higher than the Compressed Hours mean of 1.87 at the 0.03 probability level. Also the Standard Hours mean was significantly higher than the Flextime mean of 1.64 at the 0.00 probability level. It is interesting to note however, that the Flextime mean was significantly lower than the Compressed Hours mean at the

Table 41

Scheffe Analysis of Variance for Changes in Organizational Performance

11. Travel To and From Work

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	125	2.07	1,2	0.03[a]	57	2.05	1,2	0.27	65	2.09	1,2	0.05[a]
2. Compressed Hours	37	1.87	1,3	0.00[b]	6	1.83	1,3	0.00[b]	31	1.84	1,3	0.00[b]
3. Flexible Hours	213	1.64	2,3	0.01[b]	34	1.79	2,3	0.96	175	1.61	2,3	0.04[a]

F. Ratio = 39.81 Probability = 0.00 F. Ratio = 7.68 Probability = 0.00 F. Ratio = 25.93 Probability = 0.00

a Significant at .05 level.
c Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	119	1.92	1,2	0.72	57	1.93	1,2	0.52	59	1.93	1,2	0.43
2. Compressed Hours	35	2.00	1,3	0.10	6	1.67	1,3	0.06[c]	29	2.07	1,3	0.53
3. Flexible Hours	199	2.05	2,3	0.88	33	2.21	2,3	0.07	163	2.01	2,3	0.83

F. Ratio = 2.30 Probability = 0.10 F. Ratio = 4.24 Probability = 0.02 F, Ratio = 1.00 Probability = 0.37

c Significant at .10 level.

0.01 probability level. The obtained homogeneity of variance chi-square indicated that the variance was not significant at the .05 level.

Thus, travel to and from work had improved most for the Flextime group, but also the Compressed Hours group noted significantly more improvement than the Standard Hours group who noted some deterioration in this item.

However, concerning the importance of this change there were no significant differences among these means. The obtained F ratio had an associated probability of 0.10.

Management. Table 41 disclosed that there was at least one pair of means that were significantly different concerning the direction of the change. The F ratio had an associated probability of 0.00. Further investigation revealed that the Flextime mean, 1.79 was significantly lower than the Standard Hours mean of 2.05 at the 0.00 probability level. Thus, the Flextime group noted a significant improvement in travel to and from work. Furthermore, there were at least one pair of means that were significantly different concerning the importance of the change. There was a probability of 0.02 associated with obtained F ratio. The Standard Hours mean 1.93 was significantly lower than the Flextime mean of 2.21 at the 0.06 probability level.

Thus the Standard Hours group perceived changes in travel to and from work as more important than the Flextime group. In both of the above cases the obtained homogeneity of variance chi-square indicated that the variances were not homogeneous at the .05 level of significance.

Non-Management. Further examination of Table 41 disclosed that the F ratio had an associated probability of 0.0 and thus at least one pair of means concerning the nature of change in this item were significantly different. Further examination showed that the Standard Hours mean, 2.09 was significantly higher than the Compressed Hours mean of 1.84 at the 0.05 probability level. Also the Standard Hours mean was significantly higher than the Compressed hours mean of 1.61 at the 0.0 probability level. It is interesting to note that the Flextime mean was significantly lower than the Compressed Hours mean at the 0.04 probability level. Thus both of the innovative groups perceived significant improvement in travel to and from work, whereas the Standard Hours group noted some deterioration. However, the largest improvement was recorded by the Flextime group.

Despite this improvement there were no significant differences among the mean scores relating to the importance of this change, as the F ratio had an associated probability of 0.37.

Summary. The findings disclosed that for means relating to the direction of changes in the factor 'Work Scheduling' significant differences were obtained among management perceptions for 3 of these 5 variables.

However, significant differences were obtained for only 2 of these variables for the non-management group.

Thus the management group tended to perceive a slightly greater impact associated with the changes in the allocation of time upon 'Work Scheduling'.

However, concerning the importance of these changes there was a fairly high degree of consensus within each group. Only one variable contained significant differences among the non-management groups and two variables contained significant differences for the management group.

Factor C - Service to the Public and Other Departmentss

12. Service to other Branches and Departments

Total Personnel. Table 42 showed that the obtained F ratio had an associated probability of 0.50 and thus there were no significant differences among the means for this item.

However, regarding the importance of any change in this item the F ratio had an associated probability of 0.0 indicating at least one pair of means were significantly different. The Standard Hours mean 2.14 was significantly

Table 42

Scheffe Analysis of Variance for Changes in Organizational Performance

12. The Service Your Branch Provides to Other Departments and Branches

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	1.86	1,2	0.67	57	1.81	1,2	0.73	64	1.89	1,2	0.68
2. Compressed Hours	37	1.78	1,3	0.57	6	1.67	1,3	0.99	31	1.81	1,3	0.38
3. Flexible Hours	203	1.80	2,3	0.97	34	1.79	2,3	0.78	165	1.80	2,3	1.00

F. Ratio = 0.71 Probability = 0.50 F. Ratio = 0.32 Probability = 0.73 F. Ratio = 1.01 Probability = 0.37

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	2.14	1,2	0.00[b]	57	2.23	1,2	0.01[b]	61	2.05	1,2	0.00[b]
2. Compressed Hours	35	1.43	1,3	0.00[b]	6	1.50	1,3	0.00[b]	29	1.42	1,3	0.00[b]
3. Flexible Hours	205	1.57	2,3	0.36	34	1.82	2,3	0.39	168	1.51	2,3	0.67

F. Ratio = 53.01 Probability = 0.00 F. Ratio = 9.51 Probability = 0.00 F. Ratio = 28.35 Probability = 0.00

[b] Significant at .01 level.

higher from the Compressed Hours mean 1.43 and the Flextime mean 1.57 at the 0.0 probability level. Thus the two innovative groups considered any change in service to other departments arising from the adoption of a change in the workweek structure to be very important.

Management. Further examination of Table 42 disclosed that there were no significant differences among management means related to this item as all groups noted some improvement. The F ratio had as associated probability of 0.73.

However, concerning the importance of any change in service to other branches there was at least one pair of means that was significantly different. The F ratio had an associated probability of 0.00. The Standard Hours mean of 2.23, was significantly higher than both the Compressed Hours mean, 1.50 and the Flextime mean of 1.50 at the .01 probability level. Thus the innovative group management personnel considered changes in service to other branches and departments to be of major importance, whereas Standard Hours management tended to perceive such changes as being of less importance.

Non-Management. Table 42 showed that there were no significant differences among the means relating to the direction of change in this item. The F ratio had an associated probability of 0.37.

However, further examination of Table 42 revealed that at least one pair of means concerning the importance of changes in this item was significantly different. The obtained F ratio had an associated probability of 0.00. It was found that the Standard Hours mean of 2.05 was significantly higher than both the Compressed Hours mean, 1.42 and the Flextime mean of 1.51 at the 0.00 probability level.

Thus the innovative groups perceived changes in service to other branches and departments to be more significant than the Standard Hours group who tended to perceive such changes as minor in importance.

13. Service a Branch Provides to the Public

Total Personnel. Table 43 revealed that there were no significant differences among means concerning the nature of changes relating to the provision of service to the public as all groups noted improvements. The F ratio had an associated probability of 0.09.

However, there were some significant differences among means relating to the importance of any changes in the provision of service to the public, as the F ratio had an associated probability of 0.0. The Standard Hours mean, 2.13 was significantly higher than both the Compressed Hours

Table 43

Scheffe Analysis of Variance for Changes in Organizational Performance

13. The Service Your Branch Provides to the Public

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	125	1.85	1,2	0.4[illegible]	57	1.76	1,2	0.43	65	1.94	1,2	0.31
2. Compressed Hours	37	1.73	1,3	0.10	6	1.50	1,3	0.92	31	1.77	1,3	0.01^b
3. Flexible Hours	208	1.73	2,3	1.00	34	1.79	2,3	0.35	170	1.71	2,3	0.77

F. Ratio = 2.42 Probability = 0.09 F. Ratio = 1.06 Probability = 0.35 F. Ratio = 5.36 Probability = 0.01

b Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	2.13	1,2	0.00^b	57	2.19	1,2	0.00^b	61	2.05	1,2	0.00^b
2. Compressed Hours	37	1.51	1,3	0.00^b	6	1.50	1,3	0.05^a	31	1.52	1,3	0.00^b
3. Flexible Hours	205	1.77	2,3	0.01^b	34	1.94	2,3	0.11	168	1.73	2,3	0.07

F. Ratio = 32.30 Probability = 0.00 F. Ratio = 7.82 Probability = 0.00 F. Ratio = 15.55 Probability = 0.00

a Significant at .05 level.
b Significant at .01 level.

mean, 1.51 and the Flextime mean of 1.77 at the 0.0 probability level.

Thus changes in the provision of service to the public was perceived to be of major importance to the innovative groups but tended to be less important to the Standard Hours branches.

Management. Further examination of Table 43 revealed that management means focusing upon the direction of change in this item were not significantly different as all recorded improvements. The F ratio had an associated probability of 0.35.

However, there were some significant differences among mean scores related to the importance of changes in this item. The Standard Hours mean 2.19 was significantly higher than the Compressed Hours mean of 1.50 at the 0.00 probability level. Also the Standard Hours mean was significantly higher than the Flextime mean of 1.94 at the 0.05 probability level.

Thus innovative group management perceived changes in service to the public to be more important than Standard Hours management who attributed less importance to such changes.

Non-Management. The obtained F ratio had an associated probability of 0.01 indicating at least one pair of means focusing upon changes in the level of service to the public was significantly different. The Standard Hours mean, 1.94 was significantly higher than the Flextime mean of 1.71 at the 0.01 probability level, indicating the latter group noted the greatest improvement. However, all groups noted some improvement in the provision of service to the public.

Furthermore, Table 43 disclosed that the F ratio had an associated probability of 0.00 for means focusing upon the importance of any changes in the provision of service to the public. Thus, the Standard Hours mean 2.05 was found to be significantly higher than both the Compressed Hours mean, 1.52 and the Flextime mean of 1.73 at the 0.00 probability level. Here again the innovative groups perceived changes in the provision of service to the public to be of major importance, whereas the Standard Hours group attributed less importance to this item.

Client Perceptions of Service to the Public. In addition to the above analysis, a small sample of clients for these branches were surveyed to determine if they perceived any changes in the service these branches provide to the public. A summary of these findings is presented in Appendix K.

Compressed Hours Group. Firstly, concerning changes in the nature of service to the public all the clients considered that there had been no changes in (1) Availability of specific personnel with whom they communicate, and (3) Ability to arrange meetings with specific personnel when necessary. Thus, there had also been no change in the importance of these two items.

Secondly, it was found that for the remaining three items, 33.3% of the clients emphasized some deterioration in the level of public service, whereas the remainder indicated no change at all. These were: (2) Availability of personnel for spur of the moment discussions or phone calls, (4) Quality of communication about work assignments and (5) Quality of service provided by this branch.

In all of these cases the clients emphasized that there had been no changes in the importance of these variables.

Flexible Hours Group.. Firstly, concerning changes in the nature of service to the public 40% of respondents considered that (1) The availability of specific personnel with whom they must communicate, had deteriorated. Alternatively 20% of respondents indicated an improvement and 40% indicated no change in this variable.

Furthermore, 40% of the respondents considered any change in this variable to be of major importance, whereas 20% of respondents considered changes in the availability of specific personnel to be of minor importance.

Secondly, it was found that 60% of respondents noted that there had been some deterioration in (2) The availability of personnel for spur of the moment discussions or phone calls, whereas 20% noted some improvement and a further 20% of respondents indicated no change in this item.

For this variable it was found that 40% considered any changes to be of major importance and a further 40% considered changes to be of minor importance.

Finally, concerning changes in (3) Ability to arrange meetings with specific personnel when necessary, the Flexible Hours clients indicated that the nature of the service had not changed since the Flexible Hours system had been implemented.

However, for variables (4) Quality of communication about work assignments and (5) Quality of service provided by this branch, 20% of the clients indicated an improvement in the nature of these services since Flextime had been implemented in these branches. Similarly, 20 percent of the clients considered this change to be of major importance.

For each of these 3 variables, 20% of the client respondents considered any change to be of major importance, whereas the remainder indicated no change in the importance of these variables.

Summary. The findings disclosed that for means associated with changes in the factor 'Service to the Public' no significant differences were found among management means for both of these 2 items. However, significant differences were found for one of the variables for the non-management grroup.

Thus, service to the public was considered to have experienced slightly greater impact arising from alterations in the workweek by non-management respondents.

Alternatively, significant differences were obtained for both management and non-management respondents concerning the importance of these changes in the provision of service to the public. Thus both groups considered that alterations in the workweek had significant effects on the importance of changes in service to the public.

Finally, clients of both of these groups indicated some changes in the provision of service to the public, but in most cases the majority of respondents indicated no change at all.

D. Other Variables.

These variables did not load upon any of the previous factors using .4 as a cut off point for the factor analysis. However, they represent important aspects of organizational operations that may be affected by alterations in the structuring of the workweek.

14. Overall Work Performance

Total Personnel. The information presented in Table 44 showed that there were significant differences in mean scores relating to the direction of changes in this item. The F ratio had an associated probability of 0.00. It was found that the Standard Hours mean of 1.80 was significantly higher than the Compressed Hours mean of 1.54 at the 0.02 probability level. Also the Standard Hours mean was significantly higher than the Flextime mean of 1.57 at the 0.00 probability level. Thus although all groups noted improved performance, the innovative groups indicated significantly greater improvement.

However, no significant differences concerning the importance of this change were found among the groups as the F ratio had an associated probability of 0.90.

Management. Table 44 revealed no significant differences in management means concerning the direction of change in this item. There was a probability level of 0.46 associated with the obtained F ratio. All groups noted some improvement.

Similarly concerning the importance of any changes

Table 44

Scheffe Analysis of Variance for Changes in Organizational Performance

14. Overall Work Performance

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	1.80	1,2	0.02[a]	57	1.81	1,2	0.99	64	1.80	1,2	0.03[a]
2. Compressed Hours	37	1.54	1,3	0.00[b]	6	1.83	1,3	0.50	31	1.48	1,3	0.00[b]
3. Flexible Hours	210	1.57	2,3	0.96	33	1.70	2,3	0.77	173	1.53	2,3	0.40

F. Ratio = 9.14 Probability = 0.00 F. Ratio = 0.78 Probability = 0.46 F. Ratio = 6.65 Probability = 0.00

[a] Significant at .05 level.
[b] Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	118	1.93	1,2	0.99	56	1.95	1,2	0.96	59	1.92	1,2	0.99
2. Compressed Hours	34	1.94	1,3	0.93	6	2.00	1,3	1.00	28	1.93	1,3	0.99
3. Flexible Hours	196	1.91	2,3	0.94	33	1.94	2,3	0.95	160	1.91	2,3	0.97

F. Ratio = 0.10 Probability = 0.90 F. Ratio = 0.05 Probability = 0.95 F. Ratio = 0.03 Probability = 0.97

in this item there were no significant differences among mean scores. The obtained F ratio had an associated probability of 0.95.

Non-Management. Further examination of Table 44 showed that concerning the direction of change at least one pair of means was significantly different. The F ratio had an associated probability of 0.00. It was found that the Standard Hours mean 1.80 was significantly higher than the Compressed Hours mean of 1.48 at the 0.03 probability level. In addition the Standard Hours mean was significantly higher than the Flextime mean, 1.53 at the 0.00 probability level. Thus both the innovative groups perceived greater improvement in overall performance since the adoption of their innovative workweeks.

However, there were no significant differences in the mean scores relating to the importance of this change. The F ratio had an associated probability of 0.97.

15. The Availability of Services such as Dining Rooms, Elevators and Cafeterias

Total Personnel. The information presented in Table 45 showed that at least one pair of means was significantly different concerning the direction of change in this item. The F ratio had an associated probability of 0.0. Further analysis revealed that the Standard Hours mean, 1.04 was

Table 45

Scheffe Analysis of Variance for Changes in Organizational Performance

15. The Availability of Services such as Dining Rooms, Elevators and Cafeterias

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	124	2.04	1,2	0.39	57	2.04	1,2	0.45	64	2.06	1,2	0.36
2. Compressed Hours	37	1.92	1,3	0.00^b	6	1.83	1,3	0.08	31	1.90	1,3	0.00^b
3. Flexible Hours	206	1.72	2,3	0.06	34	1.85	2,3	0.99	169	1.69	2,3	0.09

F. Ratio = 18.44 Probability = 0.00 F. Ratio = 2.91 Probability = 0.06 F. Ratio = 13.51 Probability = 0.00

b Significant at .01 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	2.18	1,2	0.00^b	57	2.19	1,2	0.00^b	61	2.16	1,2	0.00^b
2. Compressed Hours	37	1.27	1,3	0.00^b	6	1.50	1,3	0.00^b	31	1.23	1,3	0.00^b
3. Flexible Hours	209	1.37	2,3	0.54	34	1.74	2,3	0.53	172	1.30	2,3	0.76

F. Ratio = 112.71 Probability = 0.00 F. Ratio = 13.42 Probability = 0.00 F. Ratio = 76.85 Probability = 0.00

b Significant at .01 level.

significantly higher than the Flextime mean 1.72 at the 0.0 probability level. Thus the Flextime group noted more significant improvement in the availability of these services.

In addition, concerning the importance of changes in this item Table 45 showed that at least one pair of means was significantly different. The F ratio had an associated probability of 0.0. The Standard Hours mean 2.18 was significantly higher than both the Compressed Hours mean 1.27 and the Flextime mean of 1.37 at the 0.0 probability level. Thus both the innovative groups regarded changes in these services to be of major importance, whereas the Standard Hours group attributed less importance to such changes. The obtained homogeneity of variance chi-square associated with both of the above F ratios indicated that the variances were not homogeneous at the .05 level of significance.

Management. Additional reviewing of Table 45 showed no significant differences in the mean scores for this item. The F ratio had an associated probability of 0.06.

However, concerning the importance of changes in this item there were significant differences among the mean scores. The obtained F ratio had an associated probability of 0.00. The Standard Hours mean, 2.19 was significantly higher than both the Compressed Hours mean, 1.50 and the

Flextime mean 1.74 at the 0.00 probability level. Thus the innovative groups perceived changes in the provision of these services to be more important.

Non-Management. Table 45 showed the obtained F ratio had an associated probability of 0.0, and therefore at least one pair of means was significantly different. The Standard Hours mean, 2.06 was significantly higher than the Flextime mean of 1.69 at the 0.00 probability level. The obtained homogeneity of variance chi-square indicated that the variances for this item were not homogeneous at the .05 level of significance.

Furthermore, Table 45 showed that at least one pair of means focusing upon the importance of changes in this item was significantly different as the F ratio had an associated probability of 0.0. The Standard Hours mean of 2.16 was significantly higher than both the Compressed Hours mean, 1.23 and the Flextime mean of 1.30 at the 0.0 probability level. Thus the innovative groups perceived changes in this item to be of major importance, whereas the Standard Hours group tended to attach minor importance to such changes.

Summary. The information contained in Table 46 presented a summary of the significant differences between the obtained mean scores for the Standard, Compressed and Flexible Hours groups as determined by the Scheffe Multiple

Table 46

Summary of Differences Between Pairs of Group Means for Organizational Performance

	Direction of Change			Importance of Change		
	Total Personnel	Management	Non Management	Total Personnel	Management	Non Management
Factor A. Organizational Communication						
1. Availability of people with whom you must work	-	S/C[a]	-	S/F[b]	S/F[b]	S/F[b]
2. Degree of participation in decisions about work assignments	-	S/F[a]	-	-	-	-
3. Degree of difficulty in scheduling work requiring others	S/F[a]	-	S/C[a]	-	-	-
4. Quality of communication about work assignments	-	-	-	-	-	-
5. Ability to arrange meetings with others when necessary	S/F[a]	C/F[a]	S/F[a]	-	-	-
6. Availability of others for 'spur of the moment' discussions or phone calls	-	S/C[a], S/F[a]	-	-	-	S/F[b], C/F[b]
Factor B. Work Scheduling						
7. Organization of your work	S/F[a]	-	S/F[a]	-	-	-
8. Availability of office equipment	-	-	-	-	-	-

Table 46 cont'd

	Direction of Change			Importance of Change		
	Total Personnel	Management	Non Management	Total Personnel	Management	Non Management
9. Desirability of respondent's Department as a place to work	S/C^a, S/F^a	S/F^a	S/C^a, S/F^a	-	-	-
10. Degree of fatigue associated with your daily work assignments	S/F^a	S/F^a	S/F^a	S/F^b, S/C^b	S/F^b, S/C^b	S/F^b, S/C^b
11. Travel to and from work	S/C^a,S/F^a,C/F^a	S/F^a	S/C^a,S/F^a,C/F^a	-	S/F^b	-
Factor C. Service to the Public						
12. The service your department provides to other departments	-	-	-	S/C^b, S/F^b	S/C^b, S/F^b	S/C^b, S/F^b
13. The service your department provides to the public	-	-	S/F^a	S/C^b, S/F^b	S/C^b, S/F^b	S/C^b, S/F^b
D. Other Variables						
14. Your over-all work performance	S/C^a, S/F^a	-	S/C^a, S/F^a	-	-	-
15. The availability of services such as dining rooms, elevators and cafeterias	S/F^a	-	S/F^a	S/C^b S/F^b	S/C^b, S/F^b	S/C^b, S/F^b

a Lowest Mean = Most improvement b Lowest Mean = Most important change

S = Standard Hours, C = Compressed Hours, F = Flexible Hours

N.B. All differences significant at .05 level.

Comparison of Means Test for two aspects of changes in organizational performance: (1) The direction of change and (2) The importance of change.

Total Personnel. Statistically significant differences were found among means for 8 of the 15 items related to the direction of changes that have occurred as determined by the perceptions of the total personnel in all groups.

In addition statistically significant differences were found among 5 of the items concerning the importance of changes in organizational performance.

Management. Table 46 showed that statistically significant differences were found among the means for 7 of the 15 items related to the direction of change in organizational performance.

Furthermore, significant difference were found among 6 of the items concerning mean scores related to the importance of changes in organizational performance.

Non-Management. Further examination of Table 46 showed that statistically significant differences related to perceptions for the direction of changes in organizational performance was found among 9 of the 15 items.

In addition, for mean scores relating to the importance of changes in items relating to organizational performance significant differences were found among 6 of the 15 items.

CHAPTER SUMMARY

This chapter examined intra group comparisons of responses concerning perceptions of job satisfaction and organizational performance.

First, it was found that the two groups involved in innovations in the management of time tended to be more satisfied with all aspects of job satisfaction, than the Standard Hours group. These differences were most evident when analyzing the perceptions of non-management personnel, as the management personnel did not indicate many significant changes.

Secondly, a considerable number of significant differences were obtained among the three groups concerning perceptions relted to both the direction of change, and the importance of change for the variables related to organizatonal performance. However, both management and non-management personnel noted a number of changes in these items related to organizational performance.

Chapter 5 will examine inter-group comparisons concerning: (1) family interaction and personal relationships, (2) Commuting patterns and (3) Leisure activities.

CHAPTER 5

RESEARCH FINDINGS: INTER-GROUP ANALYSIS OF ALTERATIONS IN THE WORKWEEK AND ORGANIZATIONAL CHANGE

This is the second of two chapters that examine inter -group comparisons of the effects of alterations in the structuring of the workweek upon factors relating to organizational operations.

The first section of this chapter examines the effects of innovations in the management of time upon family interaction and personal relationships.

Secondly, this chapter focuses upon the impact of re-structuring the workweek upon leisure activities.

Finally, this chapter analyses the relationship between innovations in the management of time and changes in commuting and parking arrangements.

ALTERATIONS IN THE WORKWEEK AND CHANGES IN FAMILY INTERACTION AND PERSONAL RELATIONSHIPS.

This phase of the empirical analysis contained in this chapter focused upon the adoption of innovations in the management of time and the effects upon family interaction and family relationships. An examination of the factor analysis information contained in Appendix G showed the inter-relationships among the following four items.

Factor A - Family Interaction and Personal Relationships

The information contained in the following Tables 47-50 examine the impact of alterations in the structuring of the workweek upon family relationships.

1. Management of Family Affairs

Total Personnel. The information presented in Table 47 revealed that at least one pair of means was significantly different for this item. The obtained F ratio had an associated probability of 0.00. Further examination showed the Standard Hours mean, 1.96 was significantly higher than the flextime mean of 1.81 at the 0.04 probability level. Furthermore, the flextime mean was significantly lower than the Compressed Hours mean of 2.06 at the 0.04 probability level. Thus, the Compressed hours group noted significant deterioration in their ability to manage family affairs, while the flextime group noted improvement.

In addition Table 47 showed that the F ratio had an associated probability of 0.00, and therefore at least one pair of means focusing on the importance of this change was significantly different. It was found that the Standard Hours mean of 1.89 was significantly higher than both the Compressed Hours mean, 1.54 and the flextime mean of 1.68 at the 0.01 probability level. All groups considered changes in

Table 47

Scheffe Analysis of Variance for Changes in Family Interaction and Personal Relationships

1. Management of Family Affairs

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	119	1.96	1,2	0.59	56	2.00	1,2	0.58	60	1.92	1,2	0.47
2. Compressed Hours	35	2.06	1,3	0.04[a]	6	1.83	1,3	0.76	29	2.07	1,3	0.22
3. Flexible Hours	204	1.81	2,3	0.02[a]	33	1.93	2,3	0.81	168	1.77	2,3	0.03[a]

F. Ratio = 5.61 Probability = 0.00 F. Ratio = 0.70 Probability = 0.50 F. Ratio = 4.37 Probability = 0.01

a Significant at .05 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	112	1.89	1,2	0.01[b]	55	1.91	1,2	0.01[b]	55	1.86	1,2	0.18
2. Compressed Hours	35	1.54	1,3	0.00[b]	6	1.33	1,3	0.41	29	1.57	1,3	0.05[a]
3. Flexible Hours	198	1.65	2,3	0.62	33	1.79	2,3	0.05[a]	163	1.61	2,3	0.98

F. Ratio = 8.22 Probability = 0.00 F. Ratio = 5.56 Probability = 0.01 F. Ratio = 3.27 Probability = 0.04

a Significant at .05 level.
b Significant at .01 level.

this item to be important but they were perceived as significantly more important by the innovative groups. The obtained homogeneity of variance chi-square for the above two F ratios indicated that the variances were not homogeneous at the .05 level of significance.

Management. Table 47 disclosed that there were no significant differences among management means related to the direction of changes concerning the management of family affairs. The F ratio had an associated probability of 0.50.

However, at least one pair of means focusing on the importance of changes in this item was significantly different because the F ratio had an associated probability of 0.01. It was found that the Standard Hours mean of 1.91 was significantly higher than the Compressed Hours mean of 1.33 at the 0.01 probability level. In addition the Compressed Hours mean was significantly lower than the flextime mean of 1.79 at the 0.05 probability level. Thus the compressed workweek group considered any change in the management of family affairs to be very important, whereas, Flextime and Standard Hours managers attributed less importance to this lack of significant change.

Non-Management. However Table 47 disclosed that there was at least one pair of means for the non- management group that perceived a significant difference in the direction of change related to the management of family affairs. The F ratio had an associated probability of 0.01.

It was found that the Compressed Hours mean, 2.07 was significantly higher than the flextime mean of 1.77 at the 0.03 probability level. Thus the Compressed Hours group noted a significant deterioration in the management of family affairs.

Furthermore, concerning the importance of changes in this item, there was at least one pair of means that was significantly different. The F ratio had an associated probability of 0.04. It was found that the Standard Hours mean of 1.86 was significantly higher than the flextime mean of 1.61 at the 0.05 probability level. Thus the flextime group considered changes in the management of family affairs to be significantly more important than the Standard hours group.

2. Amount of Time Spend With Family

Total Personnel. An examination of Table 48 showed the F ratio had an associated probability of 0.19, and thus the means focusing upon the direction of change in this item were not significantly different.

Furthermore no significant differences were obtained among the means related to the importance of changes in the amount of time spent with the family, as the F ratio had an associated probability of 0.07.

Management. Further examination of Table 48 showed

Table 48

Scheffe Analysis of Variance for Changes in Family Interaction and Personal Relationships

2. Amount of Time Spent with Family

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	120	1.98	1,2	0.63	57	2.02	1,2	0.68	60	1.95	1,2	0.90
2. Compressed Hours	33	1.83	1,3	0.20	6	1.83	1,3	0.76	27	1.89	1,3	0.54
3. Flexible Hours	204	1.88	2,3	0.99	33	1.94	2,3	0.89	168	1.85	2,3	0.95

F. Ratio = 1.69 Probability = 0.19 F. Ratio = 0.57 Probability = 0.57 F. Ratio = 0.63 Probability = 0.53

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	112	1.85	1,2	0.14	56	1.84	1,2	1.00	54	1.87	1,2	0.12
2. Compressed Hours	34	1.62	1,3	0.17	6	1.83	1,3	0.91	28	1.57	1,3	0.20
3. Flexible Hours	197	1.72	2,3	0.68	33	1.79	2,3	0.98	162	1.70	2,3	0.60

F. Ratio = 2.69 Probability = 0.07 F. Ratio = 0.09 Probability = 0.91 F. Ratio = 2.54 Probability = 0.08

that no significant differences were found among management mean scores related to the direction of changes in this item. The F ratio had an associated probability of 0.57.

Also, no significant differences were obtained among mean scores concerning the importance of changes in this item. The obtained F ratio had an associated probability of 0.91.

Non-Management Similarly, Table 48 disclosed no significant differences among non-management means focusing upon the direction of any changes in this item. A probability of 0.53 was associated with the obtained F ratio.

In addition, no significant differences were found among means related to the importance of changes in the amount of time spent with family members. The obtained F ratio had an associated probability of 0.08.

3. Amount of Time Spent With Friends

Total Personnel. Table 49 showed that no significant differences were found concerning the nature of changes in this item, as the F ratio had an associated probability of 0.56.

Similarly, no significant differences were found among mean scores concerning the importance of changes in this item. A probability level of 0.95 was associated with

Table 49

Scheffe Analysis of Variance for Changes in Family Interaction and Personal Relationships

3. Amount of Time Spent with Friends

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	119	2.01	1,2	0.96	57	2.05	1,2	0.42	59	1.95	1,2	0.63
2. Compressed Hours	34	2.03	1,3	0.69	6	1.83	1,3	0.82	28	2.04	1,3	0.97
3. Flexible Hours	196	1.97	2,3	0.70	33	2.00	2,3	0.62	160	1.96	2,3	0.66
	F. Ratio = 0.59		Probability = 0.56		F. Ratio = 0.96		Probability = 0.39		F. Ratio = 0.50		Probability = 0.61	

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	112	1.91	1,2	0.95	55	1.95	1,2	0.03[a]	55	1.89	1,2	0.86
2. Compressed Hours	34	1.94	1,3	0.99	6	2.50	1,3	1.00	28	1.82	1,3	0.97
3. Flexible Hours	194	1.92	2,3	0.97	33	1.94	2,3	0.03[a]	159	1.91	2,3	0.72
	F. Ratio = 0.04		Probability = 0.96		F. Ratio = 3.92		Probability = 0.02		F. Ratio = 0.34		Probability = 0.72	

[a] Significant at .05 level.

the obtained F ratio.

Management. Furthermore, Table 49 showed that the means associated with the direction of changes in this item were not significantly different, as the F ratio had an associated probability of 0.39.

However, at least one pair of means focusing upon the importance of changes in this item was significantly different, as the obtained F ratio had an associated probability of 0.02. It was found that the Standard Hours mean, 1.95 was significantly lower than the Compressed Hours mean of 2.50 at the 0.03 probability level. Also the Compressed Hours mean was significantly higher than the flextime mean of 1.94 at the 0.03 probability level. Thus the compressed hours management group considered the amount of time spent with friends to be considerably less important than the other two groups.

Non-Management. Table 49 showed that the means associated with the direction of changes in this item were not significantly different as the F ratio had an associated probability of 0.61.

Similarly, no significant differences were found among the non-management mean scores related to the importance of changes in this item as there was a probability level of 0.72 associated with the obtained F ratio.

4. Time Available to Organize Personal Business Affairs.

Total Personnel. An examination of the data presented in Table 50 showed that at least one pair of means related to the direction of changes in this item was significantly different as the F ratio had an associated probability of 0.01. It was found that the Standard Hours mean, 1.95 was significantly higher than the compressed hours mean of 1.62 at the 0.02 probability level. Thus the Compressed Hours group noted more significant improvement in time available to organize their personal business affairs.

Furthermore, significant differences were found among mean scores related to the importance of changes in this item as the F ratio had an associated probability of 0.00. The Standard Hours mean, 1.96 was significantly higher than both the Compressed hours mean, 1.39 and the Flextime mean of 1.61 at the 0.00 probability level. Thus the two innovative groups perceived time available to organize your personal affairs to be considerably more important than the Standard Hours group. For both of the above F ratios the obtained homogeneity of variance chi-square indicted the variances for these items were not homogenous at the .05 level of significance.

Management. Additional examination of the data in Table 50 showed that the means focusing upon the nature of changes in this item were not significantly different as there was a probability level of 0.99 associated with the

Table 50

Scheffe Analysis of Variance for Changes in Family Interaction and Personal Relationships

4. Time Available to Organize Your Personal Business Affairs

DIRECTION OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	118	1.95	1,2	0.02[a]	56	2.02	1,2	1.00	59	1.90	1,2	0.04[a]
2. Compressed Hours	34	1.62	1,3	0.07	6	2.00	1,3	0.99	28	1.54	1,3	0.28
3. Flexible Hours	198	1.79	2,3	0.28	31	2.03	2,3	0.99	164	1.75	2,3	0.23

F. Ratio = 5.02 Probability = 0.01 F. Ratio = 0.01 Probability = 0.99 F. Ratio = 3.40 Probability = 0.04

a Significant at .05 level.

IMPORTANCE OF THE CHANGE

Group	Total Personnel				Management				Non Management			
	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability	N	Mean	Pairs of Groups	Probability
1. Standard Hours	111	1.96	1,2	0.00[b]	55	1.98	1,2	0.09	54	1.96	1,2	0.00[b]
2. Compressed Hours	36	1.39	1,3	0.00[b]	6	1.50	1,3	0.81	30	1.37	1,3	0.00[b]
3. Flexible Hours	202	1.61	2,3	0.16	33	1.91	2,3	0.20	167	1.54	2,3	0.43

F. Ratio = 15.88 Probability = 0.00 F. Ratio = 2.49 Probability =0.09 F. Ratio = 10.50 Probability =0.00

b Significant at .01 level.

obtained F ratio.

Similarly, no significant differences were found among management means concerned with the importance of changes in the time available to organize business affairs. The F ratio had an associated probability of 0.09.

Non-Management Table 50 disclosed that at least one pair of means related to the direction of change in this item was significantly different as there was a probability of 0.04 associated with the obtained F ratio. It was found that the Standard Hours mean, 1.90 was significantly higher than the Compressed Hours mean of 1.54 at the 0.04 probability level.

Similarly, significant differences were also obtained for mean scores related to the importance of changes in the amount of time available for personal business affairs. The Standard Hours mean, 1.96 was significantly higher than both the Compressed Hours mean, 1.37 and the flextime mean of 1.54 at the 0.00 probability level. Thus the two innovative groups attributed significantly more importance to changes in the amount of time available to conduct personal business than the Standard Hours group did.

Summary. A summary of the significant differences found among the mean scores relating to the items included in the factor concerning family interaction and personal relationships is presented in Table 51.

Total Personnel. Statistically significant differences were found among two of the four items concerning the direction of changes relating to this factor. Furthermore, significant differences were also found among mean scores for the same two items concerning the importance of changes associated with this factor.

Management. Additional reference to Table 51 showed that significant differences were not found among any of the means related to items associated with the direction of changes in this factor. However, significant differences were found among mean scores for 2 items concerning the importance of changes in this factor.

Non-Management Table 51 also showed that significant differences were found among the mean scores related to two items concerning the direction of changes in this factor. Similarly, significant differences were found among means associated with the same two items, concerning the importance of changes in this factor.

ALTERATIONS IN THE WORKWEEK AND CHANGES IN LEISURE ACTIVITIES

Poor (1973:85) commenting on the relationship between innovations in the management of time and leisure activities stated:

> "In an article in which he discussed the effects of automation upon leisure

Table 51

Summary of Differences for Pairs of Group Means Related to Family Interaction and Personal Relationships

	Direction of Change			Importance of Change		
	Total Personnel	Management	Non Management	Total Personnel	Management	Non Management
Factor A - Family Interaction and Personal Relationships						
Management of your family affairs	S/F[a], C/F[a]	-	C/F[a]	S/C[b], S/F[b]	S/C[b], F/C[b]	S/F[b]
Amount of time spent with family	-	-	-	-	-	-
Amount of time spent with friends	-	-	-	-	C/S[b], C/F[b]	-
Time available to organize your personal business affairs	S/C[a]	-	S/C[a]	S/C[b], S/F[b]	-	S/C[b], S/F[b]

a Lowest Mean = Most improvement

b Lowest Mean = Most important change

S = Standard Hours, C = Compressed Hours, F = Flexible Hours

N.B. All differences significant at .05 level.

> time,[1] William Faunce suggested that with increased leisure time workers would probably seek more creative and service oriented outlets for their energies, inasmuch as there would be a decrease in the proportion of their free time needed to recuperate from work. He further hypothesized that more free time would enable workers to acquire the skills necessary for engaging in participant activities, resulting in a decrease in spectator activities."

The data gathered in this study provided an opportunity to compare Faunce's hypothetical results with those collected from empirical research.

Table 52, 53, 54 presented a frequency and percentage distribution outlining the changes reported in leisure activities by each of these three groups.

In the following analysis differences among the groups concerning their perceptions of change in leisure activities were considered to be important where there was at least a 20 percent disagreement among at least two groups of respondents.

(a) Creative Activities

An examination of the information presented in Tables 52, 53, 54, showed that the groups that have adopted

---

[1] William A. Faunce, "Automation and Leisure," in Erwin O. Smigel (ed.) Work and Leisure (New Haven: College and University press, 1963) pp. 85-96.

Table 52

Frequency and Percentage Distribution for Changes in Leisure Activities - Standard Hours Group

5 day week with standard hours 12 months ago		Standard hours over the last 6 months		
		Increased Participation	Same Participation	Decreased Participation
N		%	%	%
	Creative Activities			
77	Travel	22.4	69.7	7.9
80	Other hobbies	14.3	66.2	19.5
77	Read more	19.7	64.5	15.8
27	Go back to school or learn a trade	10.0	63.3	26.7
	Service Oriented Activities			
23	Active in school boards, P.T.A., Boy Scouts, etc.	16.7	75.0	8.3
25	Joined social club	19.2	65.4	11.5
11	Engaged in political action work	-	100.0	-
50	Church activities	14.0	72.0	14.0
	Participant Activities			
100	Work around the house	10.1	72.7	17.2
33	Fishing and hunting	26.3	68.4	5.3
56	Engage in some form of athletics (bowling, golf, baseball, etc.)	25.5	61.8	12.7
46	Swimming, boating	15.6	68.9	15.5
15	Got another part-time job	5.9	82.4	5.9
37	Work on car	10.3	82.1	7.7
	Spectator Activities			
40	Go to ballgames, fights, hockey games, etc.	14.3	61.9	23.8
53	Watch television a lot	25.5	74.5	-
74	Attend movies, theatre, concerts, etc.	16.2	70.3	13.5
	Social Communication Activities			
101	Spend time with family	15.0	70.0	15.0
62	Visit relatives	21.0	71.0	8.1
	Other Activities			
18	Bought or buying vacation home	-	84.2	15.8
16	Bored with free time	18.8	81.3	-
81	Rest, relax, loaf, etc.	24.1	70.9	5.1

Table 53

Frequency and Percentage Distribution for Changes in Leisure Activities - Compressed Hours Group

Before the CWW 5 day week with standard Hours		Since introduction of the CWW		
		Increased Participation	Same Participation	Decreased Participation
N		%	%	%
	Creative Activities			
28	Travel	3.2	51.6	45.2
25	Other hobbies	4.3	43.5	52.2
26	Read more	-	32.0	68.0
11	Go back to school or learn a trade	10.0	50.0	40.0
	Service Oriented Activities			
3	Active in school boards, P.T.A., Boy Scouts, etc.	-	66.7	33.3
2	Joined social club	-	100.0	-
2	Engaged in political action work	-	100.0	-
8	Church activities	-	85.7	14.3
	Participant Activities			
35	Work around the house	2.9	34.3	62.9
10	Fishing and hunting	-	58.3	41.7
15	Engage in some form of athletics (bowling, golf, baseball, etc.)	-	43.8	56.3
12	Swimming, boating	7.7	53.8	38.5
2	Got another part-time job	-	75.0	25.0
7	Work on car	-	42.9	57.1
	Spectator Activities			
14	Go to ballgames, fights, hockey games, etc.	-	73.3	26.7
23	Watch television a lot	4.2	75.0	20.8
25	Attend movies, theatre, concerts, etc.	-	80.0	20.0
	Social Communication Activities			
31	Spend time with family	3.2	32.3	64.5
23	Visit relatives	4.2	58.3	37.5
	Other Activities			
6	Bought or buying vacation home	14.3	71.4	14.3
4	Bored with free time	75.0	25.0	-
35	Rest, relax, loaf, etc.	5.9	55.9	38.2

Table 54

Frequency and Percentage Distribution for Changes in Leisure Activities - Flexible Hours Group

Before flexitime 5 day week with standard hours		Since introduction of flexitime		
		Increased Participation	Same Participation	Decreased Participation
N		%	%	%
	Creative Activities			
[illegible]	Travel	2.1	59.3	38.6
136	Other hobbies	2.3	48.9	48.9
139	Read more	2.2	43.4	54.4
51	Go back to school or learn a trade	7.0	57.9	35.1
	Service Oriented Activities			
42	Active in school boards, P.T.A., Boy Scouts, etc.	2.1	70.2	27.7
26	Joined social club	3.2	71.0	25.8
23	Engaged in political action work	7.4	88.9	3.7
64	Church activities	1.5	74.6	23.9
	Participant Activities			
177	Work around the house	2.2	56.4	41.3
45	Fishing and hunting	9.1	65.5	25.5
80	Engage in some form of athletics (bowling, golf, baseball, etc.)	2.4	63.9	33.7
71	Swimming, boating	4.0	69.3	26.7
22	Got another part-time job	16.7	83.3	-
44	Work on car	4.4	62.2	33.3
	Spectator Activities			
54	Go to ballgames, fights, hockey games, etc.	6.9	79.3	13.8
92	Watch television a lot	13.3	71.1	15.6
116	Attend movies, theatre, concerts, etc.	4.2	73.9	21.8
	Social Communication Activities			
170	Spend time with family	1.2	48.8	50.0
97	Visit relatives	1.0	69.0	30.0
	Other Activities			
32	Bought or buying vacation home	9.1	69.7	21.2
29	Bored with free time	34.5	62.1	3.4
145	Rest, relax, loaf, etc.	4.9	54.2	40.8

innovative workweek structures reported an important decline in their degree of participation in creative activities, as compared to the Standard Hours group reactions.

Travel. The two innovative groups indicated a large decrease in travel activities since the adoption of their respective innovations in the management of time. In the flextime group 38.6 percent of respondents reported a decline in travel participation, and 45.2 percent of the Compressed Hours group also reported decreased participation in this activity. However, only 7.9 percent of the Standard Hours group indicated a decrease in their travel habits.

On the other hand, an important difference was also obtained concerning increased participation in travel activities. It was found that 22.4 percent of the Standard hours respondents noted an increase in travel activities, whereas only 2.1 percent of the Flextime respondents indicated a similar increase in this activity.

Hobbies. Furthermore, 52.2 percent of the compressed hours group and 48.9 percent of the flextime respondents indicated a decline in their participation in various hobbies. However, only 19.5 percent of the Standard Hours group reported such a decline.

Reading Similarly, 68.0 percent of the Compressed Hours group, and 54.4 percent of the flextime respondents indicated decreased participation in reading activities. On the other hand only 15.8 percent of the Standard Hours group reported a similar decline.

(b) Services Oriented Activities

Important differences were found among two of the four items included in this category.

Community Involvement. It was found that 33.3 percent of the Compressed Hours respondents, and 27.7 percent of the flextime respondents indicated some decrease in their level of participation in these activities, since adopting an altered workweek structure. However, the Standard Hours group showed that only 8.3 percent of respondents perceived a decline in their participation in these activities.

Social Club Membership. The information presented in Tables 52, 53, 54, showed that 11.5 percent of the Standard Hours group, and 25.8 percent of the flextime group indicated a decline in their participation in this activitiy. However, the Compressed Hours group, on the other hand did not indicate any change in their level of participation in social club membership.

(c) Participant activities

Further examination of the information presented in Tables 52, 53 and 54, indicated that important differences were found among the groups perceptions of changes in these leisure activities for 5 of the six items included in this categorization.

Domicile Oriented Activities. A large percentage of respondents in all groups noted a decline in their participation in this activity. It was found that 82.8 percent of the Compressed Hours respondents indicated a decline in their participaton in activities concerning work around the house. However, only 41.3 percent of the flextime respondents indicated a similar deterioration in this activity.

Fishing and Hunting. It was found that 5.3 percent of the Standard Hours respondents and 13.8 percent of the flextime respondents indicated a decline in their participation in this activity. However, 41.7 percent of the Compressed Hours group suggested a similar decline in their level of participation. Alternatively, 26.3 percent of the Standard Hours respondents indicated an increase in their participation in this activity, whereas none of the Compressed Hours respondents noted any similar increase.

Participation in Athletic Pursuits. It was found that 25.5 percent of the Standard Hours respondents indicated an increase in their level of participation in these activities, whereas only 2.4 percent of the Flextime respondents, and none of the Compressed Hours respondents noted any similar increase.

On the other hand, 56.3 percent of the Compressed Hours respondents indicated a decline in athletic pursuits, compared to 33.7 percent of the respondents working under Flexible Hours, and 12.7 percent of the Standard Hours respondents.

Swimming, Boating. Both of the innovative groups recorded a large decline in these activities, as 38.5 percent of the Compressed Hours respondents and 26.7 percent of the flextime respondents indicated less involvement. However, only 15.5 percent of the Standard Hours group noted a similar decline.

Moonlighting. It was found that 25 percent of the Compressed Hours group indicated that they participated less in 'moonlighting'. However only 5.9 percent of the standard hours respondents and none of the flextime respondents indicated any decline in their participation in part time job activities.

Motor Vehicle Maintenance. Tables 52, 53, and 54, showed that 57.1 percent of the Compressed Hours group and 33.3 percent of the flextime group indicated a decline in their level of participation in this activity. Alternatively, only 7.7 percent of the Standard Hours group noted a similar decline.

(d) Spectator Activities

Important differences were found among only one of the 3 items included in this category.

Television Viewing. Among the two innovative groups, 15.6 percent of the Compressed Hours respondents found a decline in their participation in this activity, and 20.8 percent of the flextime respondents noted a similar decline. However, none of the Standard Hours respondents reported a decline in the amount of time they spent watching television. On the other hand 25.5 percent of the Standard Hours respondents recorded an increase in television viewing whereas only 4.2 percent of the Compressed Hours respondents noted a similar increase.

(e) Social Communication Activities

The data presented in Tables 52, 53, and 54, showed that important differences were found among respondents perceptions for both of these items.

Family Interaction. It was found that 50 percent of the Compressed Hours respondents and 64.5 percent of the flextime respondents indicated a decrease in their participation time spent interacting with their family. On the other hand only 15.0 percent of the Standard Hours respondents noted a similar decline.

Non-family kinship interaction. Furthermore the information presented in Tables 52, 53, and 54, revealed that 30.0 percent of the Compressed Hours respondents, and 37.5 pecent of the flextime respondents indicated a decline in their time spent visiting relatives. However only 8.1 percent of the Standard Hours group registered a similar decline in this activity. Alternatively, 21.0 percent of the Standard Hours respondents recorded an increase in this activity, compared with only 1.0 percent of the Flextime respondents noting a similar increase.

(f) Other Activities.

Important differences were found among two of the three remaining items included on this scale.

Relaxation and Recuperation. Among the two innovative groups a considerable decline in these types of activities were indicated. Among the Compressed Hours group 40.8 percent of the respondents indicated decreased participation here, and 38.2 percent of the flextime respondents indicated a similar decline. On the other hand only 5.2 percent of the Standard Hours group indicated any decrease participation in these activities.

Boredom and Leisure. Finally, the information presented in Tables 52, 53, and 54, showed that 34.5 percent of the Compressed Hours group, and 75.0 percent of the flexible hours group indicated that they tended to experience greater boredom with free time since adopting their altered work week structures. On the other hand only 18.8 percent of the Standard Hours group noted a similar increase in their level of boredom and leisure.

Summary. A summary of the important differences concerning perceptions of changes in leisure activities is presented in Table 55. It was found that for 12 of the 16 items where important differences were found relating to decreased participation in leisure activities, the innovative groups indicated a greater decline in their amount of participation than the Standard Hours group. On the other hand, where important differences were found between at least two groups concerning increases in participation in leisure activities, in five of these six cases, the Standard Hours group indicated a more important increase in their level of participation.

Thus the Faurce hypotheses were not supported by this data, as the innovative groups that had experienced more flexibility in their leisure time did not indicate increased participation in creative activities. However, the innovative groups did indicate a decline in their participation in spectator activities, but did not indicate important increases in their involvement in participation activities.

ALTERATIONS IN THE WORKWEEK AND CHANGES IN COMMUTING AND PARKING ARRANGEMENTS

Table 55

Summary of Important* Differences Among Groups Regarding Changes in Leisure Activities

	Increased Participation	Decreased Participation
Creative Activities		
Travel	S>F	F>S, C>S
Hobbies		F>S, C>S
Reading		F>S, C>S
Service Oriented Activities		
Community Involvement		C>S
Social Club Membership		F>C
Participant Activities		
Domicile Oriented Activities		S>F, C>F
Fishing and Hunting	S>C	C>F, C>S
Participation in Athletic Pursuits	S>F, S>C	F>S, C>F, C>S
Swimming, Boating		C>S
Moonlighting		C>F
Automobile Maintenance		F>S, C>S, C>F
Spectator Activities		
Television Viewing	S>C	C>S
Social Communication Activities		
Family Interaction		F>S, C>S
Non Family Kinship Interaction	S>F	C>F, C>S
Other Activities		
Relaxation and Recuperation		F>S, C>S
Boredom and Desire	C>F, C>S	

---

*Important Differences defined as at least a 20 percent difference between percentage scores for at least two groups of respondents.

The importance of the impact of innovations in the management of time upon travel and parking arrangements was discussed in detail in Chapter 2. For example, the original introduction of flextime that occurred in West Germany in the 1960's was designed to contribute to the resolution of commuting and traffic problems.

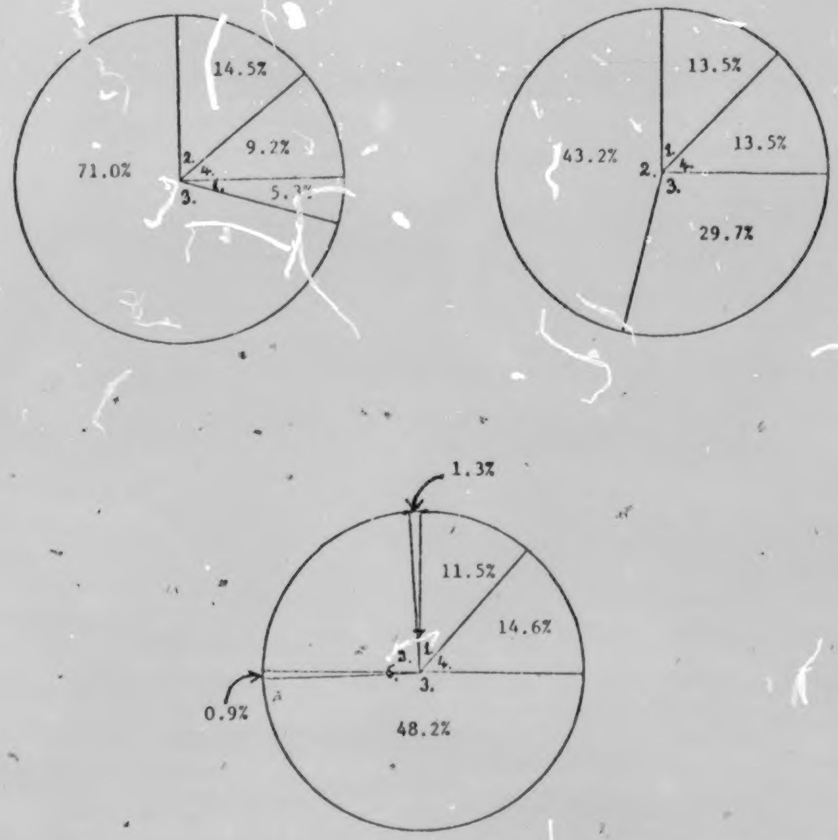
Furthermore, Tandan's (1973) indifference curve analysis emphasized the importance of the savings in commuting time arising from the adoption of a compressed workweek time structure.

This phase of the empirical analysis focused upon the impact that the adoption of innovative workweek structures has had upon commuting and parking arrangements.

Comparison of Modes of Commuting

The information presented in Figure 11 showed a comparison among those three groups concerning their usual mode of travel to and from work. First, it was interesting to note that in the two innovative groups the percentage of employees who walked to work was twice as high as in the standard hour group: i.e. flextime 11.5%; Compressed Hours 13.5% and Standard Hours 5.3%.

Perhaps the most important finding of this section of the study concerned the differences among the groups utilization of public transit services to travel to and from



1. Walk
2. Bus
3. Car (Driver)
4. Car (Passenger)
5. Bicycle or Motorcycle
6. Taxi
7. Other

Figure 11

Percentage Distribution Outlining Usual Mode of Travel To and From Work for All Groups of Respondents work. It was found that both of the innovative groups made far greater use of bus facilities to commute than the Standard Hours group, especially the respondents involved in the compressed workweek branch. Figure 11 showed that the comparative percentage relating to use of the bus service for commuting were: flextime 23.5%; Compressed Hours 43.2% and Standard Hours 14.5%.

Further examination of Figure 11 also revealed considerable differences among the use of a car, either as a driver or a passenger, to commute to and from work. In the Standard Hours group 80.2 percent of respondents used a car for commuting purposes whereas in the innovative groups the comparative figure was far smaller: flextime 62.8%; Compressed Hours 43.2%.[2]

Characteristics of Members of Commuting Groups

An issue closely related to the mode of transport used for commuting concerns the number of persons included in commuting groups. For example in Vancouver in 1976 computerized car pools were being attempted. The information presented in Figure 12 showed that the two innovative groups

---

[2] Currently the Edmonton public transit system has been receiving considerable criticism and as a result a number of important changes are planned for the future, such as the underground railway and improvements in bus services. Thus in the near future even greater changes may be expected to occur in modes of commuting to these various branches.

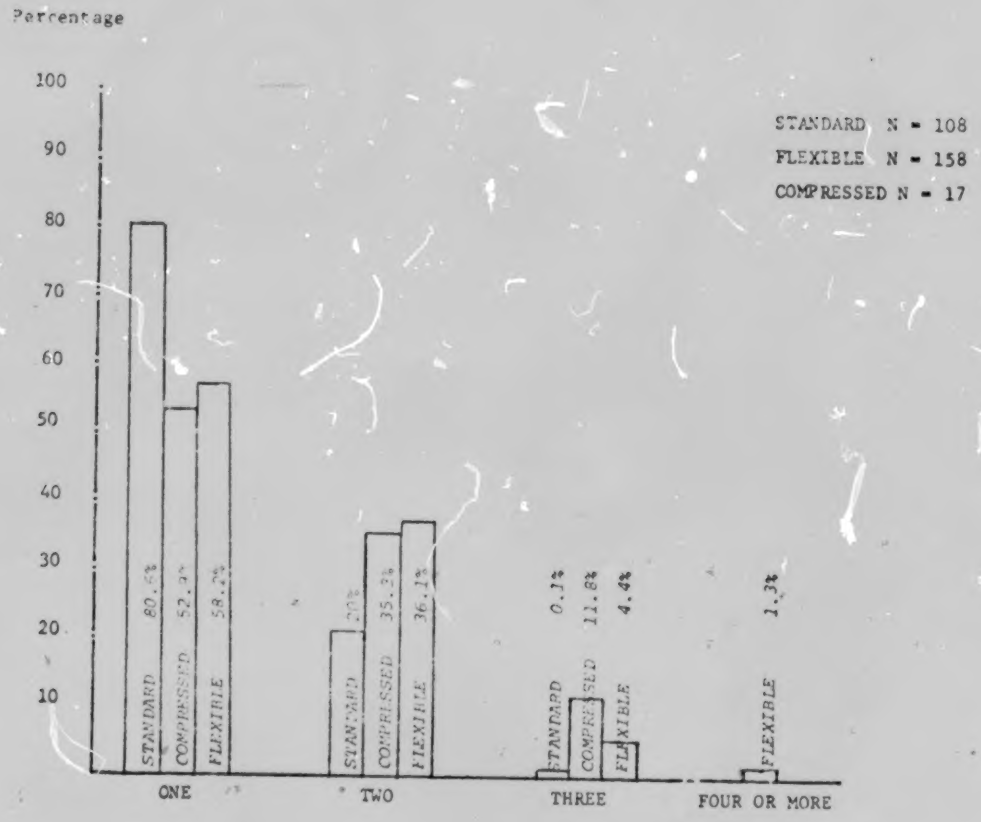


Figure 12

Percentage Distribution Outlining the Number of Members in Carpools for All Groups of Respondents made significantly greater use of car pools than did the Standard Hours groups and thus contributed less to traffic congestion within the city limits. It was found that 80.6 per cent of the Standard Hours group commuted alone in their car to and from work, whereas only 52.9 percent of the Compressed Hours respondents, and 58.2 percent of the flextime respondents commuted alone. Furthermore, Figure 12 showed that the two innovative groups had a greater percentage of respondents than the standard hours group commuting in car pools of various sizes.

First, the Standard Hours group had only 20 percent of respondents commuting in a car pool of two people, whereas 35.9 percent of the Compressed Hours respondents and 36.1 percent of the flextime rspondents commuted in car pools of this size.

Secondly, concerning car pools involving three people, 11.8% of the flextime group and 4.4% of the Compressed Hours respondents indicted they commuted in car pools of this size. However only 0.1 percent of the Standard Hours group indicated they commuted in car pools of this size.

Thirdly, the only group to commute in a car pool of 4 or more persons was the flextime group and 1.3 percent of respondents indicated they commuted in car pools of this size.

Relationship to Members of Commuting Group

Furthermore the information in Table 56 showed that the flextime respondents were more likely to travel in commuting groups with members from outside their immediate family 27.9 percent, whereas the Standard Hours respondents indicated that few of the members of their commuting groups were from outside of their immediate family.

Table 56

Frequency and Percentage Distribution Outlining
the Relationship among Members of Commuting Groups.

	Standard Hours N=20		Compressed Hours N=7		Flexible Hours N=68	
	f	%	f	%	f	%
1. Members of Your Family	18	90	6	85.7	46	67.6
2. Others	2	10	1	14.3	19	27.9
3. Both of above	-	-				4.4

Comparative Costs Incurred by Car Commuters

Apart from the operational costs of running a motor vehicle, the costs associated with the provision of parking facilities represent an important item in the car-commuters budget. The information presented in Table 57 indicated that at least 80 percent of car commuters parked their car in a lot or a garage, for all groups.

Table 57

Frequency and Percentage Distribution for Respondents Outlining the Location of Car Park Facilities.

	Standard Hours N=96		Compressed Hours N=9		Flexible Hours N=120	
	f	%	f	%	f	%
1. In a Lot or Garage.	90	93.8	9	100	99	82.5
2. On the Street	6	6.2	-	-	21	17.5

However, an examination of the data presented in Table 58 indicated that there was not a great amount of difference among the groups concerning parking costs.

Table 58

Frequency and Percentage Distribution for the Comparison of Parking Costs per Month

	Standard Hours N=75		Compressed Hours N=60		Flexible Hours N=70	
	f	%	f	%	f	%
1. Free	-	-	-	-		-
2. Dollars per month						
1-5	72	94.7	10	100	57	80.4
6-10	2	2.6	-	-	8	11.4
11-15	1	2.6	-	-	3	4.3
> 15			-	-	2	2.8

In all groups at least 80 percent of the respondents incurred parking costs between 1-5 dollars per month. However, some of the flextime respondents indicated that they were prepared to pay more than five dollars per month for parking, as 18.5 percent of the flextime respondents indicated that there parking costs exceeded $5.00 per month.

Furthermore the information contained in Table 59 showed that 40.4 percent of the flextime respondents were using parking space provided by the provincial government, whereas only 14.6 of the standard home re respondents utilized provincial government parking facilities.

Table 59

Frequency and Percentage Distribution for the Provision of Parking Space

	Standard Hours N=82		Compressed Hours N=9		Flexible Hours N=109	
	f	%	f	%	f	%
1. Provincial Government	12	14.6	-	-	44	40.4
2. Other	20	85.4	9	100	65	59.6

Summary. In the foregoing analysis it was found that both of the groups associated with innovations in the management of time made greater utilization of the public transit system. Furthermore, the two innovative groups made greater use of car pools than did the Standard Hours groups and thus contributed to the alleiviation of traffic congestion. Also the innovative groups tended to draw more members for their car pools from outside of their immediate family than the Standard Hours group.

Finally, there was little difference among the parking costs among all groups of car commuters, but the flextime group tended to make greater use of government parking facilities.

CHAPTER SUMMARY

This was the second of two chapters that focused upon intra-group comparisions of factors relating to organizational operations and alterations in the structuring of the workweek.

Specifically, this chapter examined perceptions relating to three important factors associated with the organizational and social environment of respondents: (1) changes in family interaction and personal relationships, (2) changes in leisure activities and (3) changes in commuting and parking arrangements.

The following two chapters will examine inter-group comparisons of perceptions related to organizational operations, and associated cost data.

CHAPTER 6

RESEARCH FINDINGS: INTRAGROUP ANALYSIS OF ALTERATIONS IN THE WORKWEEK AND ORGANIZATIONAL CHANGE

This is the first of two chapters that deal primarily with intra-group comparison of the effects of alterations in the structuring of the workweek upon organizational operations. The first section of this chapter examines the significant differences reported within each separate group concerning the mean perceptions related to job satisfaction and organizational performance.

The second section of this chapter deals with correlations. Correlation co-efficients are examined for variables included in the personal data sheets, and the mean perceptions related to job satisfaction, organizational performance, and family interaction and personal relationships.

DIFFERENCES BETWEEN MANAGEMENT AND NON-MANAGEMENT PERCEPTIONS OF JOB SATISFACTION

Comparison of Management and Non Management Perceptions of Job Satisfaction for the Standard Group.

The information presented in Table 60 showed significant differences between the mean scores for management and non- management personnel for the variables related to job satisfaction. It was found that significant

Table 60

Significant Differences Between Management and Non Management Perceptions of Job Satisfaction -- Standard Hours Group

Job Satisfaction	Management Mean N = 57	Non Management Mean N = 72	t	Probability
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.89	2.30	-2.47	0.02[a]
2. The way in which the program is organized	1.91	2.42	-3.11	0.00[b]
3. The method of keeping track of the hours worked each day	1.95	2.19	-1.43	0.15
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	1.96	3.65	-8.32	0.00[b]
5. The way your immediate supervisor is administering the program	1.63	2.54	-5.67*	0.00[b]
6. The arrangements you have for travel to and from work	1.79	2.39	-3.17*	0.00[b]
7. Freedom to handle personal business during the workday	2.58	3.42	-4.14	0.00[b]
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.87	3.05	-0.97	0.34
9. Changes which have occurred in the way work is done	2.35	2.54	-1.24	0.22
10. The way you now organize and complete your work	1.95	2.07	-0.88	0.38

Lowest Mean = Most Satisfactory

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

differences were obtained for 6 of the 10 variables at the .05 probability level. These variables included: (1) The overall program in your department; (2) The way the program is organized; (4) The freedom you have to decide when you will arrive and depart from work; (5) The way your immediate supervisor is administering the program; (6) The arrangements you have to travel to and from work; and (7) Freedom to handle personal business during the workday.

It is important to note that in all of these cases the management mean was lower than the non-management mean, indicating that the former group was more satisfied with changes that have occurred in the level of job satisfaction in their respective branches over the last 12 months.

Discrepancy Analysis for Standard Hours Management and Non-Management Mean Scores for Job Satisfaction.

The term discrepancy refers to the absolute value of the difference between the obtained management and non-management mean scores for items relating to job satisfaction. An examination of Figure 13 showed that in every case the management mean was lower than the non-management mean for these measures of job satisfaction.

Furthermore an examination of Table 61 revealed that in descending order of priority, the following three job satisfaction items contained the highest discrepancies concerning perceptions of change between management and non-

Job Satisfaction

1. The over-all program in your department
2. The way in which the program is organized
3. The method of keeping track of the hours worked each day
4. The freedom you have to decide when you will arrive and depart from work
5. The way your immediate supervisor is administering the program
6. The arrangements you have for travel to and from work
7. Your utilization of the service provided by the bus system
8. Changes which have occurred in the way work is done
9. The way you now organize and complete your work
10. Freedom to handle personal business during the workday

..... Non Management Mean
_____ Management Mean

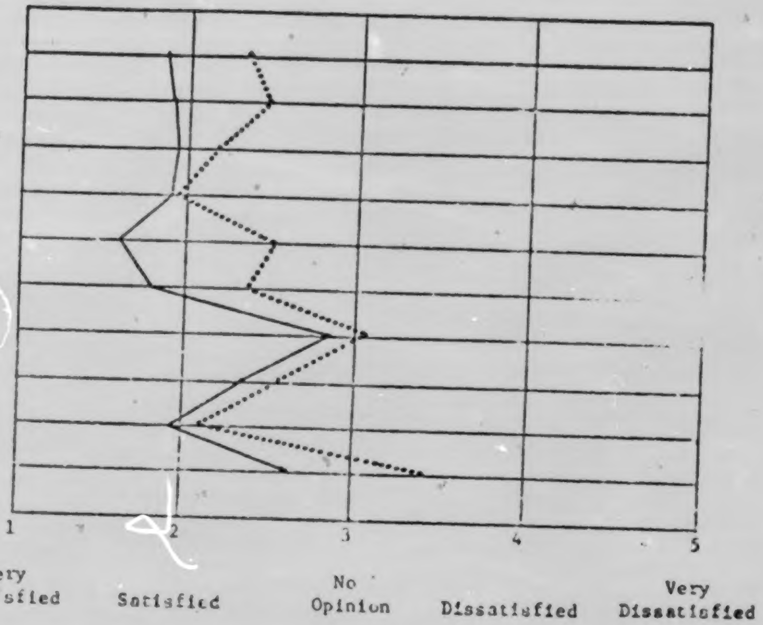


Figure 13

Profile of Standard Hours Management and Non Management Mean Scores for Job Satisfaction

234

Table 61

Discrepancy Analysis of Management and Non Management Perceptions of Job Satisfaction -- Standard Hours Group

Job Satisfaction	Management Mean N = 57	Non Management Mean N = 72	Discrepancy	Discrepancy Rank
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.89	2.30	.41	6
2. The way in which the program is organized	1.91	2.42	.51	5
3. The method of keeping track of the hours worked each day	1.95	2.19	.24	7
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	1.96	3.65	1.69	1
5. The way your immediate supervisor is administering the program	1.63	2.54	.91	2
6. The arrangements you have for travel to and from work	1.79	2.39	.60	4
7. Freedom to handle personal business during the workday	2.58	3.42	.84	3
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.87	3.05	.18	9
9. Changes which have occurred in the way work is done	2.35	2.54	.19	8
10. The way you now organize and complete your work	1.95	2.07	.12	10

* Discrepancy Rank = |Management Mean - Non Management Mean|

management groups: (4) The freedom you have to decide when you will arrive and depart from work; (5) The way your immediate supervisor is administering the program; and (7) Freedom to handle personal business during the workday.

On the other hand, in order of priority, the standard hours management and non-management group means that contained the three smallest discrepancies were: (10) The way you now complete and organize your work; (8) Your utilization of the service provided by the bus system; and (9) Changes which have occurred in the way work is done.

Comparison of Management and Non-Management Perceptions of Job Satisfaction for the Compressed Hours Group.

The information presented in Table 62 showed significant differences between the mean scores for Compressed Hours management and non-management personnel for the variables related to changes in the level of job satisfaction. Only two variables were found to be significantly different at the .05 probability level. These were: (2) The way in which the program is organized; and (5) The way your immediate supervisor is administering the program. In both cases the non-management mean was lower than the management mean indicating that the former group was more satisfied with changes that have occurred in the level of job satisfaction concerning these variables since the introduction of the compressed workweek system of time allocation.

Table 62

Significant Differences Between Management and Non Management Perceptions of Job Satisfaction -- Compressed Hours Group

Job Satisfaction	Management Mean N = 6	Non Management Mean N = 31	t	Probability
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.60	1.48	0.42[*]	0.69
2. The way in which the program is organized	2.20	1.52	2.17	0.04[a]
3. The method of keeping track of the hours worked each day	1.50	1.50	0.00*	1.00
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	2.20	1.92	0.64	0.53
5. The way your immediate supervisor is administering the program	2.20	1.47	2.31	0.03[a]
6. The arrangements you have for travel to and from work	1.50	1.39	0.50	0.62
7. Freedom to handle personal business during the workday	2.40	1.65	1.93	0.06
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.80	2.26	1.01	0.32
9. Changes which have occurred in the way work is done	1.80	1.60	0.69	0.50
10. The way you now organize and complete your work	1.80	1.52	1.18	0.25

Lowest Mean = Most Satisfactory

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

Discrepancy Analysis for Compressed Hours Management and Non-Management Mean Scores for Job Satisfaction.

Figure 14 presented a profile of the Compressed Hours management and non-management mean scores concerning perceptions of changes related to job satisfaction associated with alterations in the structure of the workweek. In all cases the management mean was higher than the non-management mean, indicating greater job satisfaction among the latter group.

Table 63 showed that in order of priority, the highest discrepancies were obtained among the following three items: (7) Freedom to handle personal business during the workday; (5) The way your immediate supervisor is administering the program; and (2) The way in which the program is organized.

In contrast to the above findings the three items containing the smallest discrepancies, indicating greatest consensus among management and non-managment perceptions of job satisfaction included the following: (3) The method of keeping track of hours each day; (6) The arrangements you have to travel to and from work; and (1) The overall program in your department.

Comparison of Management and Non-Management Perceptions of Job Satisfaction for the Flexible Hours Group.

The information presented in Table 64 presented

Job Satisfaction

1. The over-all program in your department
2. The way in which the program is organized
3. The method of keeping track of the hours worked each day
4. The freedom you have to decide when you will arrive and depart from work
5. The way your immediate supervisor is administering the program
6. The arrangements you have for travel to and from work
7. Your utilization of the service provided by the bus system
8. Changes which have occurred in the way work is done
9. The way you now organize and complete your work
10. Freedom to handle personal business during the workday

..... Non Management Mean
_____ Management Mean

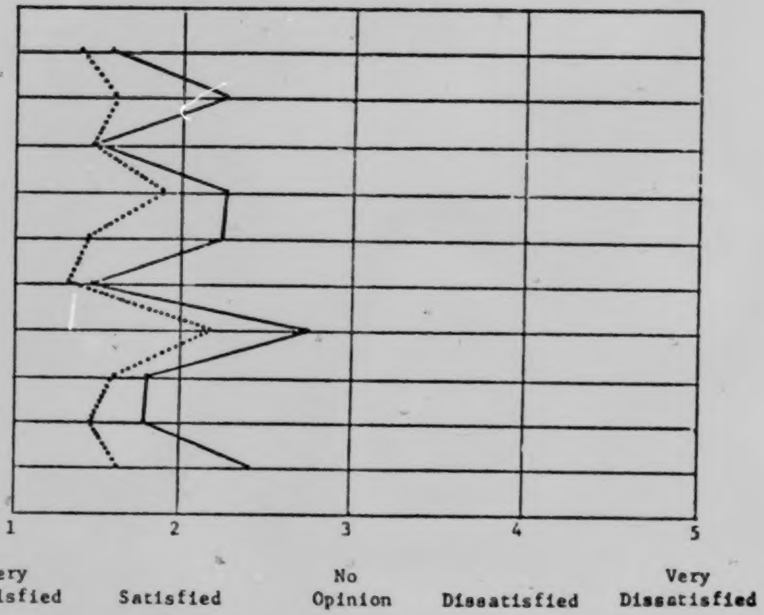


Figure 14

Profile of Compressed Hours Management and Non Management Mean Scores for Job Satisfaction

Table 63

Discrepancy Analysis of Management and Non Management Perceptions of Job Satisfaction -- Compressed Hours Group

Job Satisfaction	Management Mean N = 6	Non Management Mean N = 31	Discrepancy	Discrepancy Rank
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.60	1.48	.12	8
2. The way in which the program is organized	2.20	1.52	.68	3
3. The method of keeping track of the hours worked each day	1.50	1.50	.00	10
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	2.20	1.92	.28	5
5. The way your immediate supervisor is administering the program	2.20	1.47	.73	2
6. The arrangements you have for travel to and from work	1.50	1.39	.11	9
7. Freedom to handle personal business during the workday	2.40	1.65	.75	1
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.80	2.26	.54	4
9. Changes which have occurred in the way work is done	1.80	1.60	.20	7
10. The way you now organize and complete your work	1.80	1.52	.28	5

* Discrepancy Rank = |Management Mean - Non Management Mean|

Table 64

Significant Differences Between Management and Non Management Perceptions of Job Satisfaction -- Flexible Hours Group

Job Satisfaction	Management Mean N = 35	Non Management Mean N = 188	t	Probability
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.85	1.63	1.76*	0.09
2. The way in which the program is organized	1.91	1.83	0.57	0.57
3. The method of keeping track of the hours worked each day	2.09	1.68	2.93	0.01^b
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	1.56	1.62	-0.37	0.72
5. The way your immediate supervisor is administering the program	1.85	1.71	0.84	0.40
6. The arrangements you have for travel to and from work	1.68	1.59	0.67	0.51
7. Freedom to handle personal business during the workday	1.74	1.67	0.47	0.64
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.90	2.50	2.06	0.04^a
9. Changes which have occurred in the way work is done	2.27	2.05	1.43	0.15
10. The way you now organize and complete your work	1.85	1.69	1.13*	0.27

Lowest Mean = Most Satisfactory

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

significant differences between the mean scores for non-management and management personnel concerning their perceptions of changes in items relating to job satisfaction. It was found that significant differences were obtained among only two pairs of means at the .05 probability level. These were: (3) The method of keeping track of the hours worked each day; and (8) Your utilization of the service provided by the bus system. In both cases the non-management mean was lower than the management mean indicating that the former group was more satisfied with changes that have occurred in these items since these branches adopted a flexible hours system of time allocation.

Discrepancy Analysis For Flexible Hours Management and Non-Management Mean Scores for Job Satisfaction.

An examination of Figure 15 showed that for nine of the 10 items for which job satisfaction scores were obtained the management mean was higher than the non-management mean, indicating the latter group tended to be more satisfied with changes relating to their job since the introduction of flextime into their branches.

Table 65 showed that in order of priority, the largest discrepancies were contained for the following 3 items, indicating the greatest dissensus among management and non-management groups. These items included: (3) The method of keeping track of hours worked each day; (2) Your utilization of the service provided by the bus system; and

Job Satisfaction

1. The over-all program in your department
2. The way in which the program is organized
3. The method of keeping track of the hours worked each day
4. The freedom you have to decide when you will arrive and depart from work
5. The way your immediate supervisor is administering the program
6. The arrangements you have for travel to and from work
7. Your utilization of the service provided by the bus system
8. Changes which have occurred in the way work is done
9. The way you now organize and complete your work
10. Freedom to handle personal business during the workday

..... Non Management Mean
_____ Management Mean

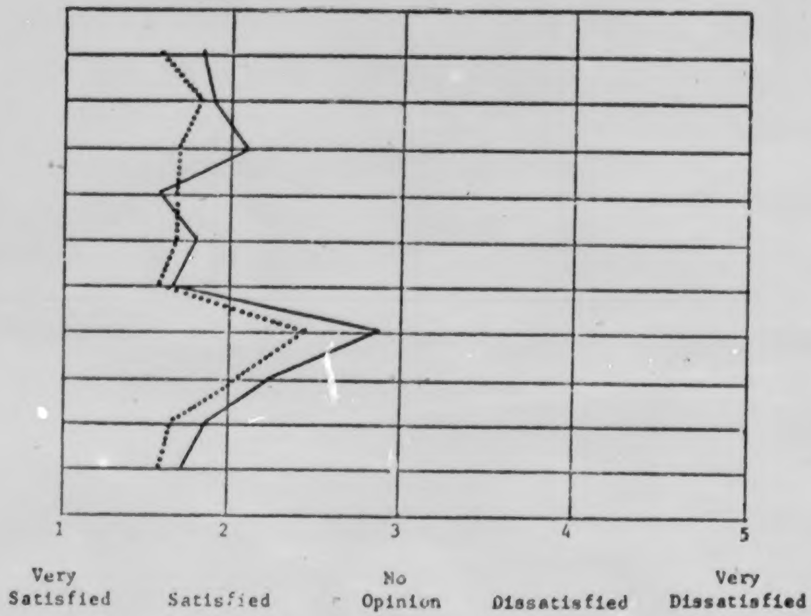


Figure 15

Profile of Flextime Management and Non Management
Mean Scores for Job Satisfaction

Table 65

Discrepancy Analysis of Management and Non Management Perceptions of Job Satisfaction -- Flexible Hours Group .

Job Satisfaction	Management Mean N = 35	Non Management Mean N = 188	Discrepancy	Discrepancy Rank
Factor A. Schedule Monitoring				
1. The over-all program in your department	1.85	1.63	.22	3
2. The way in which the program is organized	1.91	1.83	.08	8
3. The method of keeping track of the hours worked each day	2.09	1.68	.41	1
Factor B. Individual Autonomy				
4. The freedom you have to decide when you will arrive and depart from work	1.56	1.62	.06	10
5. The way your immediate supervisor is administering the program	1.85	1.71	.14	6
6. The arrangements you have for travel to and from work	1.68	1.59	.09	7
7. Freedom to handle personal business during the workday	1.74	1.67	.07	9
C. Additional Variables				
8. Your utilization of the service provided by the bus system	2.90	2.50	.40	2
9. Changes which have occurred in the way work is done	2.27	2.05	.22	3
10. The way you now organize and complete your work	1.85	1.69	.16	5

* Discrepancy Rank = |Management Mean - Non Management Mean|

(9) Changes which have occurred in the way work is done.

Alternatively, the following three items contained the smallest discrepancies indicating the greatest consensus among management and non-managements groups. These were: (4) The freedom you have to decide when you will arrive and depart from work; (7) Freedom to handle personal business during the workday; and (2) The way in which the program is organized.

INTRA GROUP COMPARISON OF DISCREPANCY RANKINGS FOR JOB SATISFACTION

Table 66 presents a comparison of the discrepancy rankings of the 10 job satisfaction items for each of the three groups of respondents.

Job Satisfaction and Highest Discrepancies

An examination of Table 66 revealed that there was fairly low agreement among the three groups concerning the job satisfaction items that incorporate the highest discrepancies. No one item was included among the three highest discrepancies for all three groups of respondents. However two items were included among the three highest discrepancies for the compressed and Standard Hours group. These were: (7) Freedom to handle personal business during the workday; and (5) The way your immediate supervisor is handling the program. In both cases the non-management mean was lower than the management mean, indicating the former

Table 66

Summary of Intra-Group Discrepancy Ranking for Job Satisfaction

Group	Three Highest Discrepancies	Three Lowest Discrepancies
Standard Hours - Variables	4, 5, 7	10, 8, 9
Compressed Hours - Variables	7, 5, 2	3, 6, 2
Flexible Hours - Variables	3, 2, 9	4, 7, 2

group was more satisfied with these changes.

Job Satisfaction and Lowest Discrepancies

Further examination of Table 66 showed that there was considerable dissensus among the three groups concerning the items that contained the lowest discrepancies. All three groups, included three different items among their three lowest discrepancy rankings.

DIFFERENCES BETWEEN MANAGEMENT AND NON-MANAGEMENT PERCEPTIONS FOR FAMILY INTERACTION AND PERSONAL RELATONSHIPS

Comparison of Management and Non-Management Perceptions of Family Interaction and Personal Relationships for the Standard Hours Group.

Direction of Change. An examination of the information presented in Table 67 showed that significant differences were found between two pairs of mean scores at the .05 level of probability. These were: (2) Amount of time spent with family, and (3) Amount of time spent with friends. In both cases the management mean was higher than the non-management mean indicating that the former group perceived greater deterioration in changes relating to these items.

Importance of Change. Further examination of Table 67 disclosed that no significant differences were found among pairs of mean scores for these items at the .05 level of probability.

Table 67

Significant Differences Between Management and Non-Management Perceptions of Family Interaction and Personal Relationships -- Standard Hours Group

Family Interaction and Personal Relationships	Direction of Change				Importance of Change			
	Management Mean N= 57	Non Management Mean N= 72	t	Probability	Management Mean N= 57	Non Management Mean N= 72	t	Probability
1. Management of your family affairs	2.09	1.98	1.45	0.15	1.91	1.85	0.76	0.45
2. Amount of time spent with family	2.23	2.05	2.10	0.04[a]	1.84	1.87	-0.33	0.74
3. Amount of time spent with friends	2.19	2.05	1.97*	0.05[a]	1.95	1.89	0.73*	0.46
4. Time available to organize your personal business affairs	2.19	2.16	0.39	0.70	1.98	1.96	0.21	0.83

* Welch t prime adjustment of t tests of unequal variance.

[a] Significant at .05 level.

Comparison of Management and Non-Management Perceptions of Family Interaction and Personal Relationships for the Compressed Hours Group.

Direction of Change. The information presented in Table 68 showed that the .05 level of probability, no significant differences were obtained between the pairs of means for these items.

Importance of Change. Further examination of Table 68 showed that only one pair of mean scores was significantly different at the .05 probability level. The management mean, 2.50 was significantly higher than the non-management mean of 1.82 at the 0.03 probability level for variable (3) Amount of time spent with friends. Thus the management group indicated that they were spending much less time with their friends, than they did prior to the adoption of the compressed workweek model.

Comparison of Management and Non-Management Perceptions of Family Interaction and Personal Relationships for the Flexible Hours Group

Direction of Changes Table 69 showed that at the .05 probability level significant differences were found between pairs of means for all four items. These were: (1) Management of your family affairs, (2) Amount of time spent with family, (3) Amount of time spent with friends, and (4) Time available to organize your personal business affairs. In all cases the management mean exceeded the non-management mean indicating that the latter group perceived greater

Table 68

Significant Differences Between Management and Non-Management Perceptions
of Family Interaction and Personal RelationsHips -- Compressed Hours Group

Family Interaction and Personal Relationships	Direction of Change Management Mean N= 6	Direction of Change Non Management Mean N= 31	Direction of Change t	Direction of Change Probability	Importance of Change Management Mean N= 6	Importance of Change Non Management Mean N= 31	Importance of Change t	Importance of Change Probability
1. Management of your family affairs	1.33	1.48	-0.66	0.51	1.33	1.59	-0.92	0.36
2. Amount of time spent with family	1.50	1.41	0.34	0.74	1.83	1.57	0.89	0.38
3. Amount of time spent with friends	1.50	1.52	-0.07	0.96	2.50	1.82	2.31	0.03*
4. Time available to organize your personal business affairs	1.50	1.23	1.10	0.28	1.50	1.37	0.43	0.67

* Significant at .05 level.

Table 69

Significant Differences Between Management and Non-Management Perceptions of Family Interaction and Personal Relationships -- Flexible Hours Group

	Direction of Change				Importance of Change			
Family Interaction and Personal Relationships	Management Mean N=35	Non Management Mean N= 188	t	Probability	Management Mean N=35	Non Management Mean N=188	t	Probability
1. Management of your family affairs	1.76	1.39	4.01	0.00[b]	1.74	1.61	1.74*	0.09
2. Amount of time spent with family	1.82	1.51	3.17	0.00[b]	1.79	1.70	0.74	0.46
3. Amount of time spent with friends	1.94	1.73	2.21	0.03[a]	1.94	1.91	0.25	0.80
4. Time available to organize your personal business affairs	1.74	1.30	4.61	0.00[b]	1.91	1.54	2.82	0.01[b]

* Welch t prime adjustment of t tests of unequal variances.

[a] Significant at .05 level.

[b] Significant at .01 level.

improvement in family interaction and personal relationships since the introduction of flextime.

Importance of Change. Additional examination of Table 69 showed that only one pair of mean scores were significantly different at the .05 probability level. The management mean 1.91 was significantly higher than the non-management mean of 1.54 at the .01 probability level for variable . (4) Time available to organize your personal business affairs. Thus the non-management group perceived changes in this item to be more important than the management group.

DIFFERENCES BETWEEN MANAGEMENT AND NON-MANAGEMENT PERCEPTIONS OF ORGANIZATIONAL PERFORMANCE

Comparison of Management and Non-Management Perceptions of Organizational Performance for the Standard Hours Group.

The information presented in Table 70 showed data outlining the significant differences between the mean scores for management and non-management personnel for the variables related to organizatonal performance.

Direction of Change. Table 70 showed that significant differences were found among only two of the 15 items at the .05 probability level. These variables included: (5) Availability of people with whom you must work; and (14) The service your department provides to the public. In both cases the non-management mean was higher

Table 70

Significant Differences Between Management and Non-Management Perceptions of Organizational Performance -- Standard Hours Group

	Direction of Change				Importance of Change			
Organizational Performance	Management Mean N= 57	Non Management Mean N=72	t	Probability	Management Mean N=57	Non Management Mean N= 72	t	Probability
Factor A. Organizational Communication								
1. Availability of people with whom you must work	1.91	2.08	-2.07	0.04*	2.00	1.92	1.66	0.10
2. Degree of participation in decisions about work assignments	1.98	1.89	1.07*	0.29	1.98	1.92	0.83*	0.41
3. Degree of difficulty in scheduling work requiring others	2.11	2.08	0.33*	0.74	2.04	2.05	-0.23*	0.82
4. Quality of communication about work assignments	1.96	1.98	-0.25	0.80	1.95	1.92	0.40	0.69
5. Ability to arrange meetings with others when necessary	2.05	2.08	-0.33	0.74	2.07	2.09	-0.20	0.85
6. Availability of others for 'spur of the moment' discussions or phone calls	2.05	2.06	-0.12	0.45	2.05	2.02	0.45	0.65
Factor B. Work Scheduling								
7. Organization of your work	1.91	1.86	0.64	0.52	2.02	1.95	0.80	0.42

Table 70 cont'd.

Organizational Performance	Direction of Change Management Mean N= 57	Non Management Mean N= 72	t	Probability	Importance of Change Management Mean N= 57	Non Management Mean N= 72	t	Probability
8. Availability of office equipment	1.93	1.95	-0.34	0.73	2.05	1.95	1.74	0.09
9. Desirability of respondent's Department as a place to work	2.07	2.03	0.47*	0.41	1.96	1.82	1.79*	0.08
10. Degree of fatigue associated with your daily work assignments	2.11	2.05	0.82	0.41	1.96	1.97	-0.03	0.97
11. Travel to and from work	2.05	2.09	-0.62*	0.54	2.00	1.92	1.66*	0.10
Factor C. Service to the Public								
12. The service your department provides to other departments	1.81	1.89	-1.21	0.23	1.96	2.00	-0.50*	0.62
13. The service your department provides to the public	1.75	1.94	-2.35	0.02[a]	1.89	2.00	-1.41	0.16
D. Other Variables								
14. Your over-all work performance	1.81	1.80	0.12*	0.91	2.02	1.90	1.34*	0.18
15. The availability of services such as dining rooms, elevators and cafeterias	2.04	2.06	-0.42	0.68	1.98	2.02	-0.63	0.53

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

than the management mean, indicating that the latter group perceived greater improvement in these items.

Importance of Change. Table 70 showed that no significant differences were found among these 15 items relating to organizational performance at the .05 level of probability.

Discrepancy Analysis for Standard Hours Management and Non-Management Mean Scores for Organizational Performance.

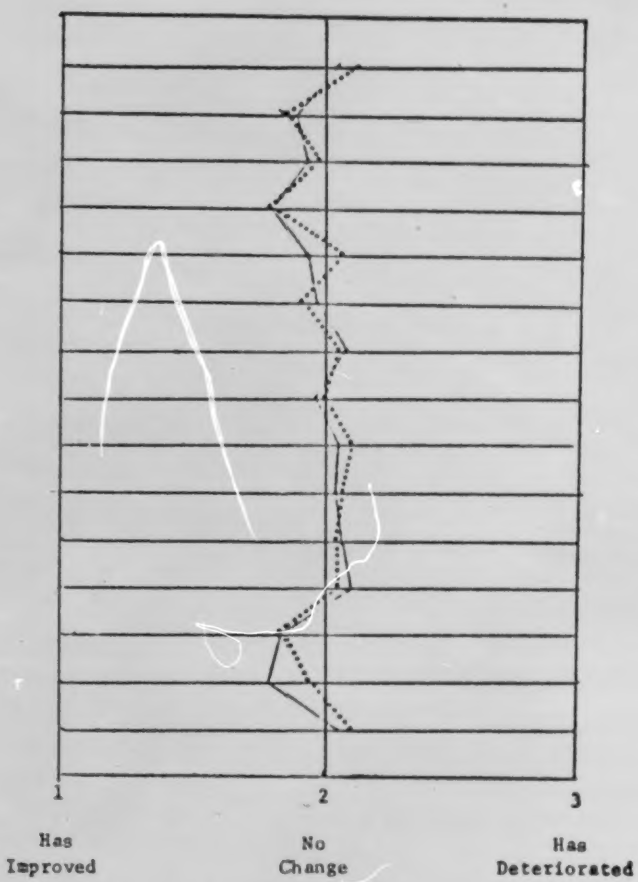
Direction of Change. Figure 16 presents a profile of the standard hours management and non-management mean scores concerning perceptions of the direction of changes in organizational performance. It was found that for 9 of the 15 items the non-management mean was higher than the management mean, indicating that the former group perceived the direction of change to be less acceptable.

Table 71 showed that in order of priority, the three highest discrepancies were obtained for the following items: (13) The service your department provides to the public; (1) Availability of people with whom you must work; and (2) Degree of participation in decisions about work assignments.

Alternatively, in order of priority the greatest consensus was indicated among the following three items as they contained the lowest discrepancies: (14) Your overall work performance; (6) Availability of others for 'spur of the moment' discussions or phone calls; and (15) The

Organizational Performance

1. Travel to and from work
2. Organization of your work
3. Availability of office equipment
4. Your over-all work performance
5. Availability of people with whom you must work
6. Degree of participation in decisions about work assignments
7. Degree of difficulty in scheduling work requiring others
8. Quality of communication about work assignments
9. Ability to arrange meetings with others when necessary
10. Availability to other for 'spur of the moment' discussions or phone calls
11. Desirability of respondent's Department as a place to work
12. Degree of fatigue associated with your daily work assignments
13. The service your department provides to other departments
14. The service your department provides to the public
15. The availability of services such as dining rooms, elevators and cafeterias



———— Management

.... Non Management

Figure 16

Profile of Standard Hours Management and Non Management Mean Scores Relating To the Direction of Changes in Organizational Performance

Table 71

Discrepancy Analysis of Management and Non Management Perceptions of Organizational Performance -- Standard Hours Group

Organizational Performance	Direction of Change: Management Mean N= 57	Direction of Change: Non Management Mean N= 72	Direction of Change: Discrepancy	Direction of Change: Discrepancy Rank	Importance of Change: Management Mean N=57	Importance of Change: Non Management Mean N= 72	Importance of Change: Discrepancy	Importance of Change: Discrepancy Rank
Factor A. Organizational Communication								
1. Availability of people with whom you must work	1.91	2.08	.17	2	2.00	1.92	.08	5
2. Degree of participation in decisions about work assignments	1.98	1.89	.09	3	1.98	1.92	.06	7
3. Degree of difficulty in scheduling work requiring others	2.11	2.08	.03	9	2.04	2.05	.01	13
4. Quality of communication about work assignments	1.96	1.98	.02	11	1.95	1.92	.03	10
5. Ability to arrange meetings with others when necessary	2.05	2.08	.03	9	2.07	2.09	.02	12
6. Availability of others for 'spur of the moment' discussions or phone calls	2.05	2.06	.01	14	2.05	2.02	.03	10
Factor B. Work Scheduling								
7. Organization of your work	1.91	1.86	.05	6	2.02	1.95	.07	6

Table 71 cont'd.

Organizational Performance	Direction of Change Management Mean N= 57	Non Management Mean N= 72	Discrepancy	Discrepancy Rank	Importance of Change Management Mean N= 57	Non Management Mean N= 72	Discrepancy	Discrepancy Rank
8. Availability of office equipment	1.93	1.95	.02	11	2.05	1.95	.10	4
9. Desirability of respondent's Department as a place to work	2.07	2.03	.04	7	1.96	1.82	.14	1
10. Degree of fatigue associated with your daily work assignments	2.11	2.05	.06	5	1.96	1.97	.01	13
11. Travel to and from work	2.05	2.09	.04	7	2.00	1.92	.08	5
Factor C. Service to the Public								
12. The service your department provides to other departments	1.81	1.89	.08	4	1.96	2.00	.04	8
13. The service your department provides to the public	1.75	1.94	.19	1	1.89	2.00	.11	3
D. Other Variables								
14. Your over-all work performance	1.81	1.80	.01	14	2.02	1.90	.12	2
15. The availability of services such as dining rooms, elevators and cafeterias	2.04	2.06	.02	11	1.98	2.02	.04	8

availability of services such as dining rooms, elevators and cafeterias, (8) Availability of office equipment and (4) Quality of communications about work assignments. These latter 3 items shared tied ranks.

Importance of Change. Figure 17 presents a profile of the Standard Hours management and non-management mean scores concerning percpetions of the importance of changes in organizational performance. It was found that the management mean was higher than the non-management mean for 9 of the 15 items, indicating that the former group tended to perceive changes in these items to be of less importance.

Table 71 showed that in order of priority the three highest discrepancies were obtained for the following items: (a) Desirability of the respondents department as a place to work; (2) Your overall work performance; and (13) The service your department provides to the public.

On the other hand, the greatest consensus was obtained for the following 3 items because they contained the lowest discrepancies: (10) Degree of fatigue associated with your daily work assignments; (5) Ability to arrange meetings with others when necessary; and (6) Availability of others for 'spur of the moment' discussions and phone calls, and (4) Quality of communication about work assignments. These last two items shared tied ranks.

Comparison of Management and Non-Management Perceptions of Organizational

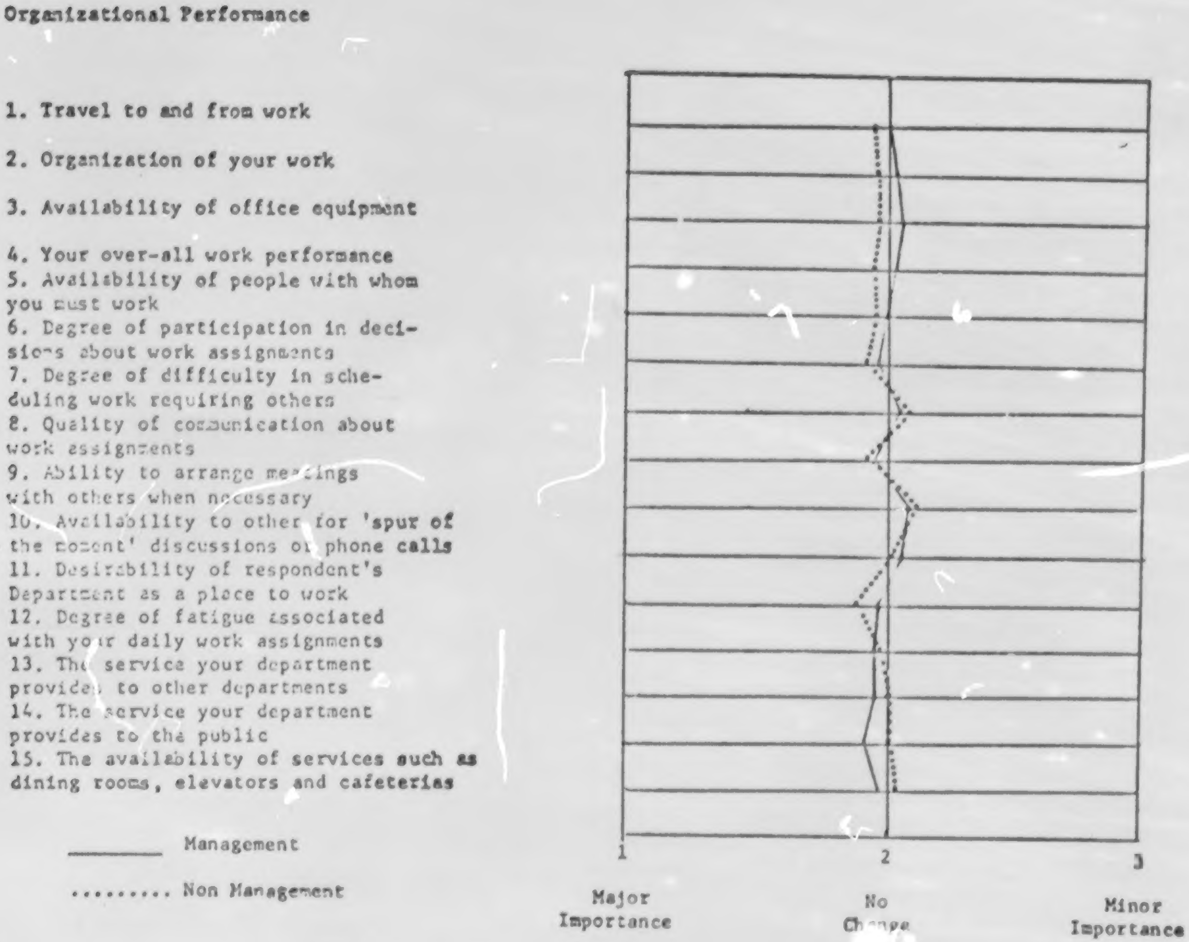


Figure 17

Profile of Standard Hours Management and Non Management Mean Scores Relating To the Importance of Changes in Organizational Performance

Performance for the Compressed Hours Group.

Direction of Change. An examination of Table 72 showed that significant differences were found between three pairs of mean scores among these 15 items, at the .05 probability level. These were: (1) Availability of people with whom you must work; (2) Availability of others for 'spur of the moment' discussions or phone calls; and (3) Desirability of respondents branch as a place to work. In all cases the management mean exceeded the non- management mean indicating the latter group noted greater improvement in these items.

Importance of Change. Table 72 showed that no significant differences were found among any of these 15 items relating to organizational performance at the .05 probability level.

Discrepancy Analysis for Compressed Hours Management and Non-Management Mean Scores for Organizational Performance

Direction of Change. The examination of Figure 18 showed a profile of the Compressed Hours mean scores covering the direction of change in organizatonal performance. It was found that for 8 of the 15 items the management mean was higher than the non-management mean indicating that the latter group perceived the direction of change in these items to be more acceptable.

Table 72

Significant Differences Between Management and Non-Management Perceptions of Organizational Performance -- Compressed Hours Group

	Direction of Change				Importance of Change			
Organizational Performance	Management Mean N=6	Non Management Mean N= 31	t	Probability	Management Mean N= 6	Non Management Mean N= 31	t	Probability
Factor A. Organizational Communication								
1. Availability of people with whom you must work	2.67	2.03	3.35	0.00[b]	1.83	2.07	-1.17	0.26
2. Degree of participation in decisions about work assignments	2.00	1.74	1.22	0.12	2.00	1.86	0.59	0.56
3. Degree of difficulty in scheduling work requiring others	2.33	2.07	1.53	0.14	2.17	2.10	0.26	0.80
4. Quality of communication about work assignments	2.00	1.84	0.75	0.46	2.00	1.93	0.29	0.78
5. Ability to arrange meetings with others when necessary	2.33	1.96	1.85	0.07	2.17	2.10	0.24	0.81
6. Availability of others for 'spur of the moment' discussions or phone calls	2.83	2.07	3.86	0.00[b]	2.00	2.21	-0.76	0.46
Factor B. Work Scheduling								
7. Organization of your work	1.83	1.84	0.58	0.57	1.83	1.89	-0.19	0.85

Table 72 cont'd.

Organizational Performance	Direction of Change Management Mean N= 6	Non Management Mean N= 31	t	Probability	Importance of Change Management Mean N=6	Non Management Mean N= 31	t	Probability
8. Availability of office equipment	1.83	1.84	-0.03	0.98	1.83	2.04	-0.91	0.37
9. Desirability of respondent's Department as a place to work	2.83	2.07	3.86	0.00[b]	1.83	1.81	0.07	0.95
10. Degree of fatigue associated with your daily work assignments	1.83	1.87	-0.17	0.86	2.00	1.86	0.59	0.56
11. Travel to and from work	1.83	1.84	-0.03	0.98	1.83	2.07	-1.17	0.25
Factor C. Service to the Public								
12. The service your department provides to other departments	1.67	1.81	-0.65	0.26	1.67	2.07	-1.52	0.14
13. The service your department provides to the public	1.50	1.77	-1.22	0.23	1,67	2.07	-1.32	0.20
D. Other Variables								
14. Your over-all work performance	1.83	1.48	1.58	0.12	2.00	1.54	1.76	0.09
15. The availability of services such as dining rooms, elevators and cafeterias	1.83	1.90	-0.39	0.70	1.83	2.07	-1.02	0.32

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

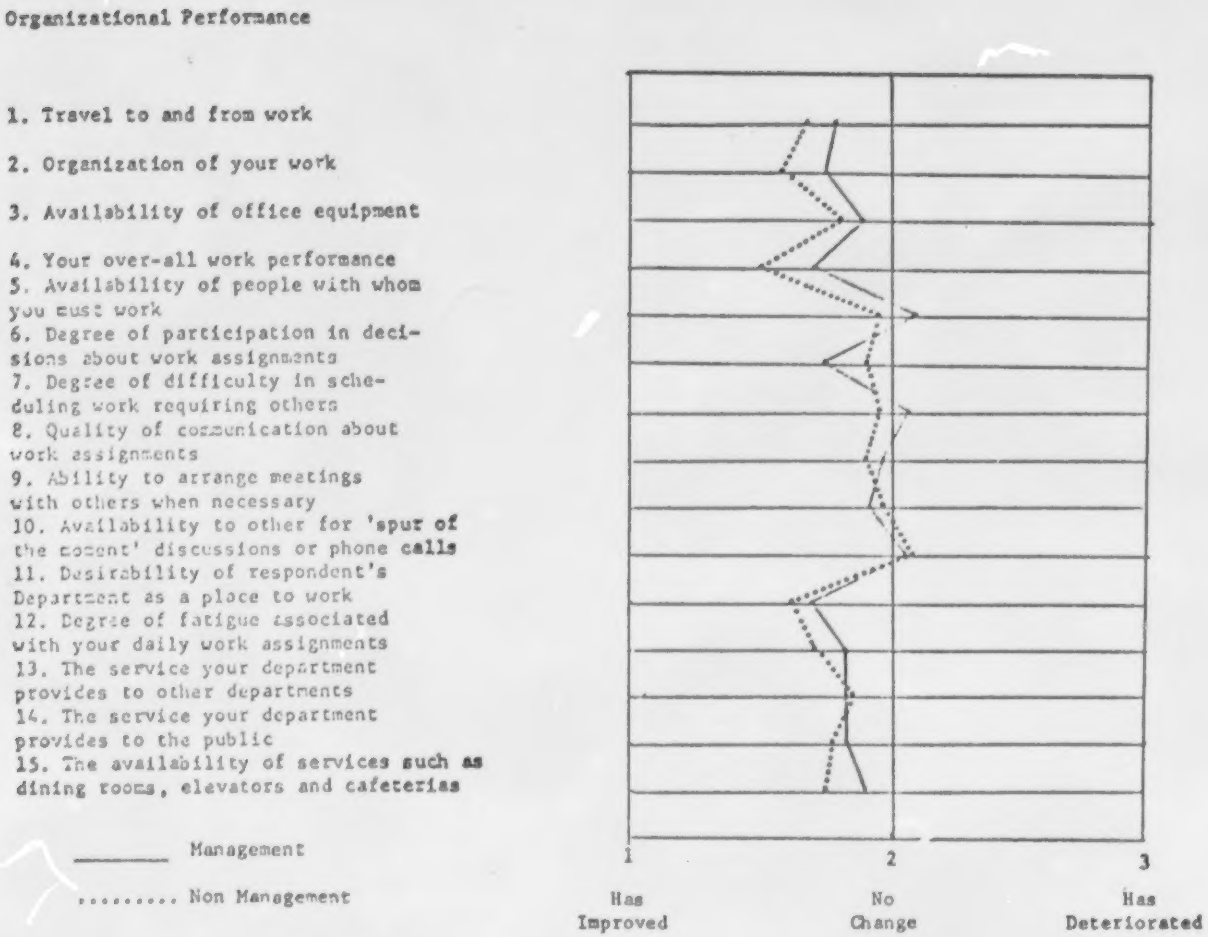


Figure 18

Profile of Flexible Hours Management and Non Management Mean Scores Relating To the Direction of Changes in Organizational Performance

The information presented in Table 73 showed that the greatest dissensus occurred among the following 3 items, that in order of priority contained the highest discrepancies: (9) Desirability of respondents department as a place to work; (6) Availability of others for 'spur of the moment' discussions and phone calls; and (1) Availability of people with whom you must work.

On the other hand Table 73 showed that the 3 smallest discrepancies were obtained among the following items, indicating the greatest level of consensus among these two groups: (11) Travel to and from work; (7) Organization of your work; and (8) Availability of office equipment.

Importance of Change. Figure 19 presents a profile of the Compressed Hours mean scores concerning the perceived importance of changes in these items relating to organizational performance. It was found that for 8 of the 15 items the non-management mean was higher than the management mean indicating that the former group tended to perceive changes in these items to be of lesser importance.

An examination of Table 73 showed that the three items that contained the greatest discrepancies, indicating the most disagreement between these two groups included: (14) Your overall work performance; (12) The service your branch provides to other branches' and (13) The service your branch provides to the public.

Table 73

Discrepancy Analysis of Management and Non Management Perceptions of Organizational Performance -- Compressed Hours Group

Organizational Performance	Direction of Change				Importance of Change			
	Management Mean N= 6	Non Management Mean N= 31	Discrepancy	Discrepancy Rank	Management Mean N= 6	Non Management Mean N= 31	Discrepancy	Discrepancy Rank
Factor A. Organizational Communication								
1. Availability of people with whom you must work	2.67	2.03	.64	3	1.83	2.07	.14	6
2. Degree of participation in decisions about work assignments	2.00	1.74	.26	7	2.00	1.66	.14	6
3. Degree of difficulty in scheduling work requiring others	2.33	2.07	.26	7	2.17	2.10	.07	10
4. Quality of communication about work assignments	2.00	1.84	.16	9	2.00	1.93	.07	10
5. Ability to arrange meetings with others when necessary	2.33	1.96	.37	4	2.17	2.10	.07	10
6. Availability of others for 'spur of the moment' discussions or phone calls	2.83	2.07	.76	1	2.00	2.21	.21	6
Factor B. Work Scheduling								
7. Organization of your work	1.83	1.84	.01	13	1.83	1.89	.06	13

Table 73 cont'd.

Organizational Performance	Direction of Change Management Mean N= 6	Non Management Mean N= 31	Discrepancy	Discrepancy Rank	Importance of Change Management Mean N= 6	Non Management Mean N= 31	Discrepancy	Discrepancy Rank
8. Availability of office equipment	1.83	1.84	.01	13	1.83	2.04	.11	9
9. Desirability of respondent's Department as a place to work	2.83	2.07	.76	1	1.83	1.81	.02	14
10. Degree of fatigue associated with your daily work assignments	1.83	1.87	.04	12	2.00	1.86	.14	6
11. Travel to and from work	1.83	1.84	.01	13	1.83	2.07	.24	4
Factor C. Service to the Public								
12. The service your department provides to other departments	1.67	1.81	.14	10	1.67	2.07	.40	2
13. The service your department provides to the public	1.50	1.77	.27	6	1.67	2.07	.40	2
D. Other Variables								
14. Your over-all work performance	1.83	1.48	.35	5	2.00	1.54	.46	1
15. The availability of services such as dining rooms, elevators and cafeterias	1.83	1.90	.07	11	1.83	2.07	.24	4

Organizational Performance

1. Travel to and from work
2. Organization of your work
3. Availability of office equipment
4. Your over-all work performance
5. Availability of people with whom you must work
6. Degree of participation in decisions about work assignments
7. Degree of difficulty in scheduling work requiring others
8. Quality of communication about work assignments
9. Ability to arrange meetings with others when necessary
10. Availability to other for 'spur of the moment' discussions or phone calls
11. Desirability of respondent's Department as a place to work
12. Degree of fatigue associated with your daily work assignments
13. The service your department provides to other departments
14. The service your department provides to the public
15. The availability of services such as dining rooms, elevators and cafeterias

______ Management

.... Non Management

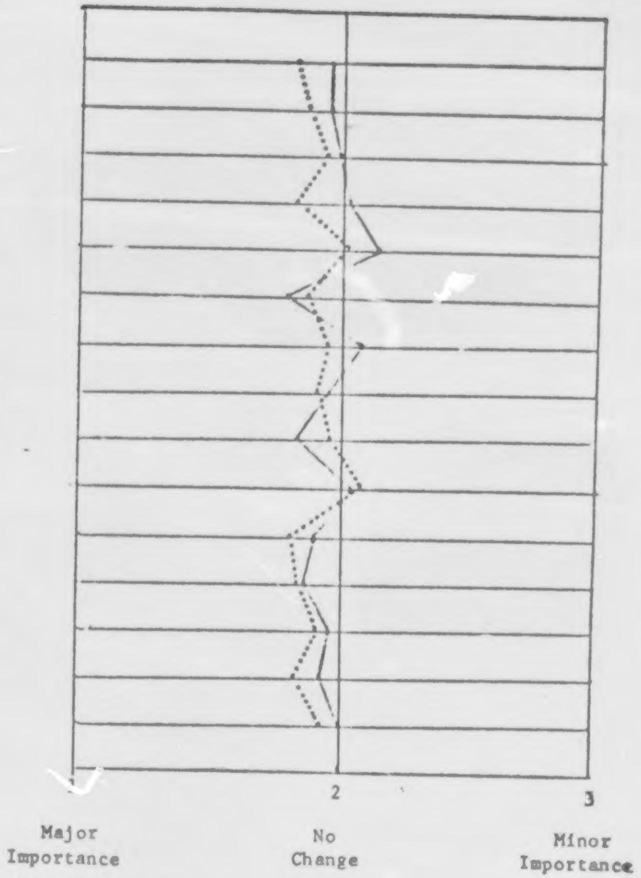


Figure 19

Profile of Flexible Hours Management and Non Management Mean Scores Relating To the Importance of Changes in Organizational Performance

On the other hand the three items containing the smallest discrepancies were: (2) Desirability of respondents branch as a place to work; (7) Organization of your work; and (3) Degree of difficulty in scheduling work requiring others, (4) Quality of communication about work assignments, and (5) Ability to arrange meetings with others when necessary. These last three variables shared tied ranks. For these items these two groups perceived the highest level of agreement concerning the importance of changes in these variables.

Comparison of Management and Non-Mangement Perceptions of Organizational Performance for the Flexible Hours Group.

Direction of Change. The data presented in Table 74 indicated that only two of the 15 items related to organizational performance contained significant differences between the mean scores, at the .05 level of probability. These were : (11) Travel to and from work; and (15) The availability of services such as dining rooms, elevators and cafeterias. In both cases the mangement group mean exceeded the non-mangement mean score, indicating the latter group perceived greater improvement in these items.

Importance of Change. Only one item, (14) Your overall work performance obtained mean scores that were significantly different at the .05 probability level. The management mean, 2.03 indicated that any change in this item

Table 74

Significant Differences Between Management and Non Management Perceptions of Organizational Performance -- Flexible Hours Group

Organizational Performance	Direction of Change: Management Mean N= 35	Direction of Change: Non Management Mean N= 188	Direction of Change: t	Direction of Change: Probability	Importance of Change: Management Mean N= 35	Importance of Change: Non Management Mean N= 188	Importance of Change: t	Importance of Change: Probability
Factor A. Organizational Communication								
1. Availability of people with whom you must work	2.15	1.99	1.40*	0.17	2.21	2.01	1.68*	0.10
2. Degree of participation in decisions about work assignments	1.76	1.85	-1.23	0.22	1.81	1.89	-0.90	0.37
3. Degree of difficulty in scheduling work requiring others	2.06	1.92	1.50	0.14	2.09	1.92	1.78	0.08
4. Quality of communication about work assignments	1.94	1.87	0.99	0.32	1.94	1.91	0.38	0.70
5. Ability to arrange meetings with others when necessary	1.88	1.91	-0.28	0.78	1.85	1.93	-0.93	0.35
6. Availability of others for 'spur of the moment' discussions or phone calls	2.06	2.10	-0.44	0.66	2.03	2.06	-0.31	0.76
Factor B. Work Scheduling								
7. Organization of your work	1.76	1.59	1.89	0.06	1.94	1.85	0.76	0.44

Table 74 cont'd.

Organizational Performance	Direction of Change Management Mean N= 35	Non Management Mean N= 188	t	Probability	Importance of Change Management Mean N= 35	Non Management Mean N= 188	t	Probability
8. Availability of office equipment	1.91	1.8[illegible]	0.52	0.60	2.00	1.96	0.48	0.63
9. Desirability of respondent's Department as a place to work	1.70	1.59	1.10	0.27	1.88	1.71	1.44	0.15
10. Degree of fatigue associated with your daily work assignments	1.88	1.70	1.72	0.09	1.84	1.83	0.16	0.87
11. Travel to and from work	1.79	1.61	2.10	0.04[a]	1.94	1.77	1.43	0.15
Factor C. Service to the Public								
12. The service your department provides to other departments	1.79	1.80	-0.07	0.95	1.97	1.92	0.61	0.55
13. The service your department provides to the public	1.79	1.71	0.94	0.35	1.94	1.81	1.21	0.23
D. Other Variables								
14. Your over-all work performance	1.70	1.53	1.72	0.09	2.03	1.75	2.27	0.02[a]
15. The availability of services such as dining rooms, elevators and cafeterias	1.85	1.69	2.20*	0.03[a]	2.00	1.89	1.19*	0.24

* Welch t prime adjustment of t-tests of unequal variances.

a Significant at .05 level.

b Significant at .01 level.

tended to be less important, than the non-mangement group mean of 1.75, who perceived any changes to be of more major importance.

Discrepancy Analysis for Flexbible Hours Management and Non-Management Mean Scores for Organizational Performance

Direction of Change. Figure 20 showed a profile of the flexible hours mean scores concerning the direction of change in organizational performance. It was found that for 11 of the 15 items the management mean was higher than the non-management mean, indicating that the latter group perceived the direction of change in these items to be more acceptable.

Table 75 showed that the largest discrepancies were obtained among the following three items: (10) Degree of fatigue associated with your work assignments; (11) Travel to and from work; and (7) Organization of your work, and (14) Your overall work performance. The last two items shared tied ranks.

Alternatively, Table 75 showed that the three smallest discrepancies were found for the following three items: (12) The service your department provides to other departments; (8) Availability of office equipment; and (5) Ability to arrange meetings with others when necessary.

Importance of Change. The information presented in Figure 21 showed a profile of the flexible hours mean scores

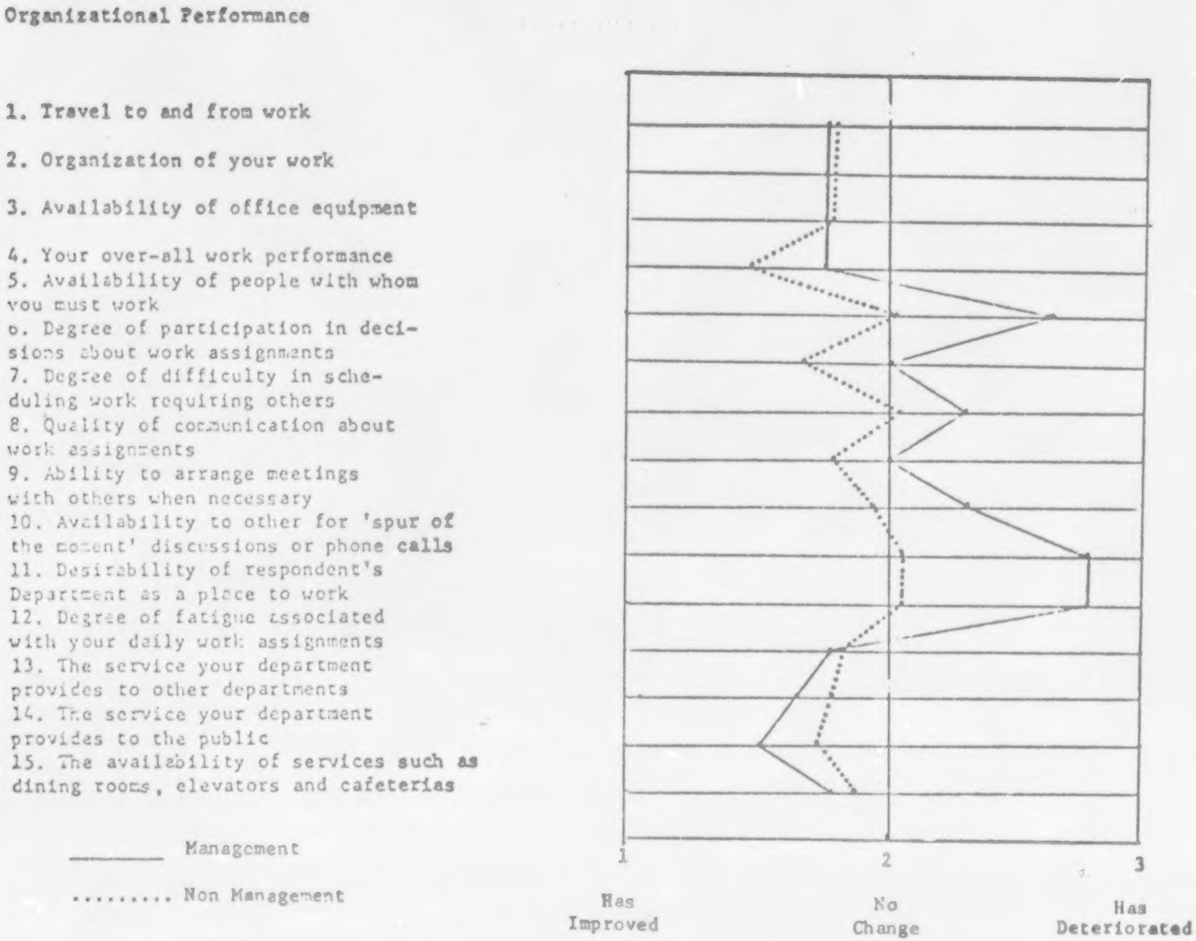


Figure 20

Profile of Compressed Hours Management and Non Management Means Scores Relating To the Direction of Changes in Organizational Performance

Table 75

Discrepancy Analysis of Management and Non Management Perceptions
of Organizational Performance -- Flexible Hours Group

	Direction of Change				Importance of Change			
Organizational Performance	Management Mean N= 35	Non Management Mean N= 188	Discrepancy	Discrepancy Rank	Management Mean N= 35	Non Management Mean N= 188	Discrepancy	Discrepancy Rank
Factor A. Organizational Communication								
1. Availability of people with whom you must work	2.15	1.99	.16	5	2.21	2.01	.20	2
2. Degree of participation in decisions about work assignments	1.76	1.85	.09	9	1.81	1.89	.08	9
3. Degree of difficulty in scheduling work requiring others	2.06	1.92	.14	7	2.09	1.92	.17	3
4. Quality of communication about work assignments	1.94	1.87	.07	11	1.94	1.91	.03	13
5. Ability to arrange meetings with others when necessary	1.88	1.91	.03	13	1.85	1.93	.08	9
6. Availability of others for 'spur of the moment' discussions or phone calls	2.06	2.10	.04	12	2.03	2.06	.03	13
Factor B. Work Scheduling								
7. Organization of your work	1.76	1.59	.17	3	1.94	1.85	.09	8

Table 75 cont'd.

Organizational Performance	Direction of Change Management Mean N= 35	Non Management Mean N= 188	Discrepancy	Discrepancy Rank	Importance of Change Management Mean N=35	Non Management Mean N= 188	Discrepancy	Discrepancy Rank
8. Availability of office equipment	1.91	1.88	.03	13	2.00	1.96	.04	12
9. Desirability of respondent's Department as a place to work	1.70	1.59	.11	8	1.88	1.71	.17	4
10. Degree of fatigue associated with your daily work assignments	1.88	1.70	.18	1	1.84	1.83	.01	15
11. Travel to and from work	1.79	1.61	.18	1	1.94	1.77	.17	4
Factor C. Service to the Public								
12. The service your department provides to other departments	1.79	1.80	.01	15	1.97	1.92	.05	11
13. The service your department provides to the public	1.79	1.71	.08	10	1.94	1.81	.13	6
D. Other Variables								
14. Your over-all work performance	1.70	1.53	.17	3	2.03	1.75	.28	1
15. The availability of services such as dining rooms, elevators and cafeterias	1.85	1.69	.16	5	2.00	1.89	.11	7

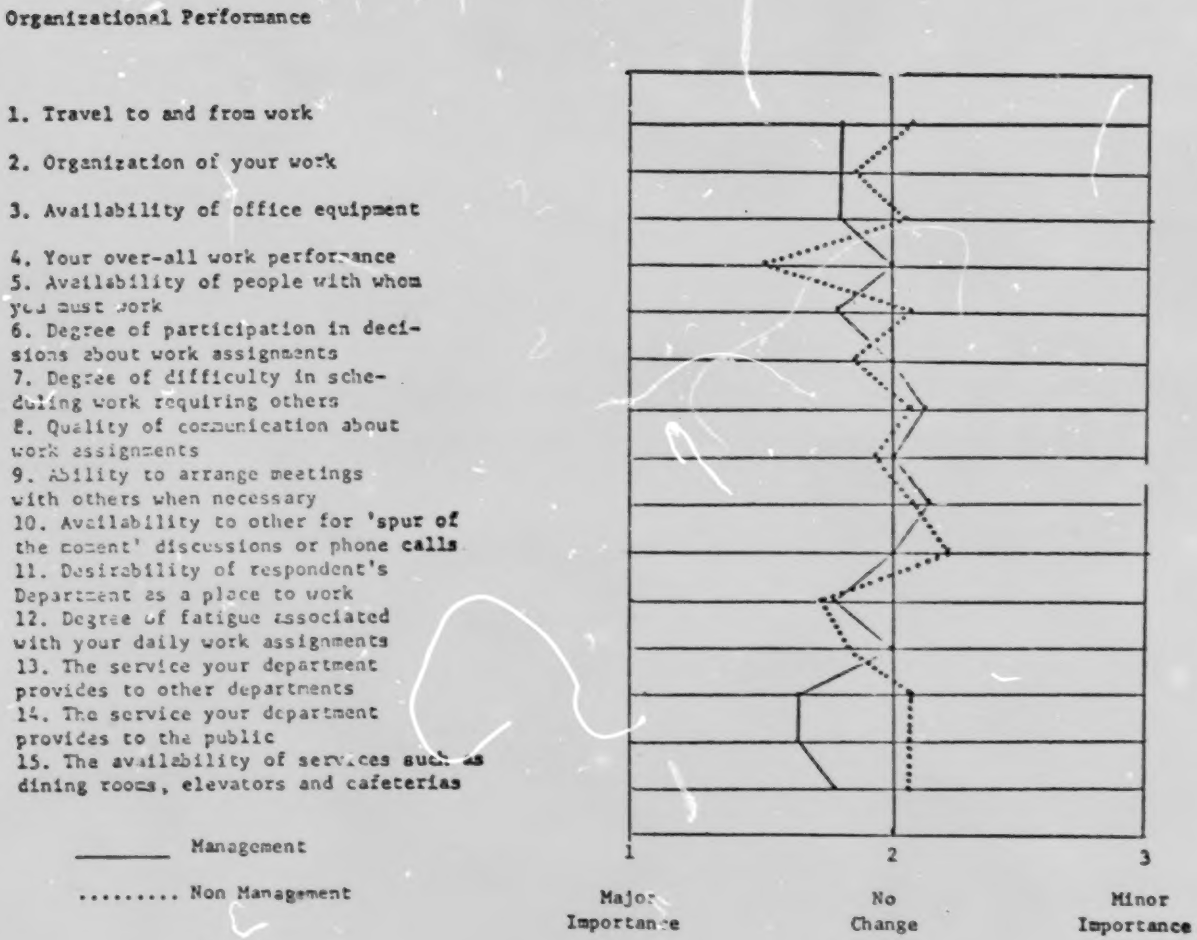


Figure 21

Profile of Compressed Hours Management and Non Management Mean Scores Relating To the Importance of Changes in Organizational Performance relating to their perceptions of the importance of changes associated with organizational performance. It was found that for 12 of the 15 items the management mean was higher than the non-management mean, indicating that the latter group attributed greater importance to changes in these items.

Table 75 showed that in order of priority the greatest disensus was found among the following 3 items because they contained the highest discrepancies: (14) Your overall work performance; (1) Availability of people with whom you must work; and (3) Degree of difficulty in scheduling work requiring others.

On the other hand in order of priority the smallest discrepancies were contained among the following three items: (10) Degree of fatigue associated with your daily work assignments; (6) Availability of others for 'spur of the moment' discussions or phone calls; and (4) Quality of communications about work assignments.

INTRA GROUP COMPARISON OF DISCREPANCY RANKINGS FOR ORGANIZATIONAL PERFORMANCE

Table 76 presents a summary of the three highest and three lowest discrepancy scores obtained for organizational performance items for each of the three groups of respondents for: (a) The direction of changes in organizatonal performance, and (b) The importance of changes in organizational performance.

Table 76

Summary of Intra-Group Discrepancy Rankings for Organizational Performance

Group	Three Highest Discrepancies: Direction of Change	Three Highest Discrepancies: Importance of Change	Three Lowest Discrepancies: Direction of Change	Three Lowest Discrepancies: Importance of Change
Standard Hours - Variables	13, 1, 2	9, 14, 13	[14,6], [4,8,15]	[3, 10], 5
Compressed Hours - Variables	[6, 9], 1	14, [13, 12]	[7, 8, 11]	9,7,[5,4,3]
Flexible Hours - Variables	[10,11], [14,7]	14, 1, 3	12, 8, 5	10, 4, 6

[ ] = Tied Ranking.

Discrepancy Rankings and the Direction of Change

Highest Discrepancies. An examination of Table 76 revealed that there was fairly low agreement concerning the organizational performance items that incorporate the highest discrepancies between management and non-management mean perceptions. Only one item, (1) Availability of people with whom you must work was included by at least two groups, namely the standard and compressed hours groups.

Lowest Discrepancies. Only one variable was included among the 3 lowest discrepancy items for all three groups, namely (8) Availability of office equipment.

Discrepancy Ranking and the Importance of Change

Highest Discrepancies. The information contained in Table 76 showed that there was somewhat higher consensus among the three groups concerning the items that contained the highest discrepancies. Variable (14) Your overall work performance was included by all three groups, amongst their three highest discrepancies.

Furthermore, Variable (13) The service your branch provides to the public was included by standard and Compressed Hours groups.

Lowest Discrepancies. Table 76 showed that there was only small agreement amongst the three groups concerning the items that contained the lowest discrepancies. Four variables were included among the lowest discrepancies by at least 2 groups. These included the following: (3) Degree of difficulty in scheduling work requiring others; (4) Quality of communication about work assignments; (5) Ability to arrange meetings with others when necessary; and (10) Degree of fatigue associated with your daily work assignments.

CORRELATION ANALYSES BETWEEN PERSONAL VARIABLES AND JOB SATISFACTION

The information presented in Chapter 3 discussed in detail the personal characteristics of each group of respondents. This section of the analysis focused upon an examination of the relationship between these personal variables and the respondents perceptions of job satisfaction as related to their various workweek structues.

Pearson product moment correlation coefficients were calculated for these personal variables and the 10 job satisfaction items. These personal variables included: Age, Sex, Occupational Category, Income, Marital Status, Dependents Requiring Assistance, Family Size, Educational Record and Employment of Spouse. A .05 probability level was used to determine statistically significant correlations.

Correlation Analyses for Standard Hours Respondents

The information presented in Table 77 revealed that some significant relationships were found to exist between

Table 77

Correlation Co-efficients for Standard Hours Perceptions of Job Satisfaction

Job Satisfaction	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variable * 1	-0.095	0.280	-1.511	0.084	0.155	0.075	-0.147	0.093	-0.017	0.844	0.030	0.732	-0.052	0.553	-0.125	0.153	-0.156	0.114
2	-0.128	0.145	-0.258	0.003[b]	0.256	0.003[b]	-0.247	0.004[b]	-0.077	0.380	-0.017	0.846	-0.051	0.566	-0.250	0.004[b]	-0.163	0.098
3	-0.053	0.545	-0.133	0.128	0.103	0.240	-0.121	0.168	-0.097	0.267	0.041	0.642	-0.118	0.179	-0.108	0.218	-0.112	0.256
4	-0.113	0.198	-0.301	0.001[b]	0.575	0.000[b]	-0.402	0.000[b]	-0.202	0.020[a]	-0.037	0.677	-0.276	0.001[b]	-0.449	0.000[b]	-0.243	0.013[a]
5	-0.186	0.033[a]	-0.316	0.000[b]	0.408	0.000[b]	-0.345	0.000[b]	-0.154	0.077	-0.04[illegible]	0.638	-0.258	0.003[b]	-0.350	0.000[b]	-0.233	0.018
6	-0.098	0.262	-0.275	0.001[b]	0.231	0.008[b]	-0.228	0.008[b]	-0.212	0.015[a]	0.150	0.085	-0.240	0.006[b]	-0.207	0.017	-0.214	0.029[a]
7	-0.100	0.252	-0.070	0.425	-0.032	0.720	-0.009	0.916	-0.084	0.337	0.123	0.161	-0.022	0.803	0.063	0.474	-0.015	0.878
8	-0.082	0.348	-0.044	0.613	0.060	0.492	-0.019	0.832	0.008	0.924	0.046	0.601	-0.038	0.668	-0.035	0.698	-0.117	0.238
9	0.052	0.553	-0.066	0.450	0.049	0.578	-0.056	0.527	0.082	0.351	-0.007	0.444	-0.008	0.925	-0.051	0.565	-0.198	0.044[a]
10	-0.048	0.581	-0.173	0.048[a]	0.343	0.000[b]	-0.227	0.008[b]	-0.211	0.015[a]	-0.003	0.969	-0.225	0.009[b]	-0.233	0.007[b]	-0.205	0.037[a]

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

the standard hours group perception of job satisfaction and all personal variables except the number of dependents who require assistance before and after work.

A significant relationship was found between the age of respondents and their perceptions of the way their supervisors were administering the program (r=-0.186). Furthermore, a significant relationship was found to exist between the sex of respondents and 5 job satisfaction items: (2) The way in which the program is organized (r=-0.258), (4) The freedom you have to decide when you will arrive and depart from work (r=-0.301), (5) The way your immediate supervisor is administering the program (r=-0.316), (6) The arrangements you have to travel to and from work (r=-0.275), and (10) Freedom to handle personal business during the work day (r = -0.173).

Similarly, occupational category and income were found to be significantly correlated to these same 5 job satisfaction items. Firstly, for occupational category the obtained significant correlation co-efficients were as follows: Variable 2 (r=0.256), Variable 4 (r=0.575), Variable 6 (r=0.408), Variable 7 (r=0.231) and Variable 10 (r=0.343).

Secondly, for the same variables the obtained correlation coefficients for income were as follows: Variable 2 (r=-0.247), Variable 4 (r=-0.402), Variable 5 (r=-0.345), Variable 6 (r=-0.228) and Variable 10 (r=0.188).

The obtained correlation coefficients for marital status showed three significant relationships for these job satisfaction items: (4) The freedom you have to decide when you will arrive and depart from work (r=-0.202), (6) The arrangements you have to travel to and from work, (10) Freedom to handle personal business during the workday (r=-0.211).

Furthermore, a significant relationship was found to exist between family size and four job satisfaction items: (4) The freedom you have to decide when you will arrive and depart from work (r=-0.276), (5) The way your immediate supervisor is administering the program (r=-0.258), (6) The arrangements you have for travel to and from work (r=-0.240) and (10) Freedom to handle personal business during the workday (r=-0.225).

In addition, significant correlations were found between the educational background of Standard Hours respondents and three job satisfaction items: (2) The way in which the program is organized (r= -0.250), (4) The freedom you have to decide when you will arrive and depart from work (r=-0.449), (5) The way your immediate supervisor is administering the program (r=-0.350) and (10) Freedom to handle personal business during the workday (r=0.233).

Finally, a significant relationship was found to exist between the employment status of the respondents spouse and four job satisfaction items: (3) The method of keeping track cf hours worked each day (r=-0.112), (5) The way your immediate supervisor is administering the program (r=-0.233), (9) The way ycu now organize and complete your work (r=-0.198) and (10) Freedom to handle personal business during the workday (r=-0.205).

Correlation Analyses for Compressed Hours Respondents

A summary of the obtained correlation coefficients for the Compressed Hours group is presented in Table 78. It was found that very few significant relationships were found between the Compressed Hours respondents personal variables and their perceptions of job satisfaction. No significant correlations were obtained for the following variables at the .05 level of significance: Sex, Occupational Classification, Marital Status, Family Size, and the Employment Status of the Respondents Spouse.

However a significant relationship was found between the age of respondents and the following five job satisfaction items: (1) The overall program in your department (r=-0.350), (2) The way in which the program is organized (r=-0.343), (5) The way your immediate supervisor is administering the program (r=-0.347), (8) Changes which have cccurred in the way work is done (r=-0.498) and (9) The way you now complete and organize your work (r=-0.526).

In addition income was found to be significantly

Table 78

Correlation Co-efficients for Compressed Hours Perceptions of Job Satisfaction

Job Satisfaction		Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
		Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variable*	1	-0.350	0.034[a]	-0.185	0.272	0.185	0.272	-0.248	0.138	-0.056	0.741	0.331	0.045[a]	-0.018	0.914	-0.254	0.129	-0.151	0.537
	2	-0.343	0.038[a]	0.020	0.908	-0.020	0.908	-0.112	0.508	0.162	0.337	0.178	0.292	-0.083	0.625	0.111	0.515	-0.296	0.219
	3	-0.130	0.443	-0.003	0.988	0.099	0.561	-0.001	0.996	-0.210	0.213	0.348	0.035[a]	-0.200	0.236	0.129	0.447	0.150	0.541
	4	-0.102	0.548	-0.060	0.726	-0.002	0.992	-0.046	0.787	0.134	0.431	-0.011	0.947	-0.120	0.478	-0.186	0.270	-0.281	0.243
	5	-0.344	0.037[a]	0.068	0.688	-0.068	0.688	-0.079	0.643	0.118	0.486	0.229	0.172	-0.195	0.248	0.039	0.820	-0.221	0.362
	6	-0.394	0.016	-0.083	0.624	0.083	0.624	-0.169	0.317	-0.182	0.281	0.425	0.009[b]	-0.230	0.171	-0.134	0.428	-0.036	0.727
	7	-0.245	0.144	0.072	0.670	-0.020	0.907	[illegible]	0.635	0.040	0.814	-0.016	0.924	-0.033	0.847	-0.345	0.037[a]	0.023	0.927
	8	-0.498	0.002[a]	-0.135	0.428	0.135	0.428	-0.326	0.049[a]	-0.132	0.437	0.157	0.353	-0.206	0.222	-0.262	0.118	-0.173	0.478
	9	-0.526	0.001[a]	-0.141	0.407	0.141	0.407	-0.377	0.022[a]	-0.115	0.498	0.172	0.309	-0.011	0.951	-0.299	0.072	-0.173	0.478
	10	-0.241	0.151	0.187	0.267	-0.035	0.837	-0.100	0.558	0.139	0.413	0.109	0.523	-0.030	0.862	0.066	0.697	-0.209	0.391

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

correlated with two of these job satisfaction items: (8) Changes which have occurred in the way work is done (r=0.326) and (9) The way you now complete and organize your work (r=-0.377).

Similarly, a significant relationship was found to exist between respondents who had dependents requiring assistance before and after work and three job satisfaction items: (1) The overall program in your department (r=0.331), (3) The method of keeping track of hours worked each day (r=0.348) and (6) The arrangements you have to travel to and from work (r=0.425).

Finally a significant relationships was found to exist between the level of education of respondents and (7) Your utilization of the service provided by the bus system (r=0.345).

Correlation Analyses for Flexible Hours Respondents

The information presented in Table 79 showed the relationship between Flextime respondents personal variables and their perceptions of job satisfaction.

Also, for this innovative group few significant relationships were found to exist between the flextime respondents personal variables and their perceptions of job satisfaction. No signfiicant correlations were obtained for the following variables at the .05 level of significance:

Table 79

Correlation Co-efficients for Flexible Hours Perceptions of Job Satisfaction

Job Satisfaction	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variable * 1	-0.068	0.313	0.006	0.951	-0.089	0.180	-0.013	0.845	0.041	0.535	-0.007	0.916	-0.075	0.259	-0.022	0.743	-0.098	0.247
2	-0.069	0.304	0.116	0.080	-0.029	0.669	-0.029	0.665	-0.017	0.800	-0.019	0.782	0.097	0.148	-0.000	1.000	-0.087	0.303
3	0.031	0.636	0.151	0.023[a]	-0.167	0.012[a]	0.145	0.029[a]	0.095	0.155	-0.138	0.038[a]	0.123	0.066	0.104	0.117	-0.042	0.618
4	-0.070	0.292	-0.112	0.094	0.024	0.723	-0.081	0.224	-0.112	0.093	0.071	0.284	-0.011	0.870	-0.041	0.545	-0.126	0.137
5	-0.058	0.386	0.033	0.622	-0.029	0.667	-0.033	0.624	0.018	0.793	-0.018	0.789	0.090	0.178	-0.037	0.581	-0.061	0.470
6	-0.030	0.233	0.049	0.467	-0.032	0.632	-0.068	0.311	-0.048	0.472	-0.009	0.899	0.062	0.353	-0.013	0.845	0.082	0.335
7	-0.164	0.014[a]	0.113	0.088	-0.087	0.192	-0.000	0.995	0.077	0.691	-0.061	0.361	0.078	0.242	0.048	0.478	0.002	0.979
8	-0.031	0.644	0.038	0.385	-0.048	0.470	0.030	0.659	0.037	0.584	-0.049	0.465	-0.040	0.543	0.048	0.472	-0.015	0.859
9	-0.031	0.646	-0.000	0.995	-0.082	0.220	-0.010	0.881	0.021	0.753	-0.007	0.918	-0.015	0.826	0.031	0.648	-0.085	0.317
10	-0.002	0.982	-0.096	0.149	-0.024	0.717	-0.033	0.621	0.008	0.904	-0.051	0.443	0.018	0.792	-0.018	0.789	-0.049	0.563

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

Income, Marital Status, Family Size, Educatonal Record, and Employment Status of the Respondents Spouse.

Alternatively, the age of respondents was found to be significantly related to (7) Your utilization of the service provided by the bus system (r=0.164).

Similarly, the sex of respondents was found to be signficartly related to (3) The method of keeping track of hours worked each day (r=0.151).

Furthermore the occupational classification of flextime respondents was significantly correlated with their perceptions of (3) The method of keeping track of hours worked each day (r=-0.167).

Also the level of income of respondents was found to be significantly related to (3) The method of keeping track of hours worked each day (r=0.145).

Finally, a significant relationship was found to exist between respondents with dependents requiring assistance before and after work and (3) The method of keeping track of hours worked each day (r=-0.138).

CORRELATON ANALYSES BETWEEN PERSONAL VARIABLES AND ORGANIZATONAL PERFORMANCE

The section of these correlation analyses focused upon the relationship between the personal variables of respondents for each group and their perceptions concerning:

(a) the direction of changes in organizational performance and (b) the importance of changes in organizational performance.

Correlation Analyses for Standard Hours Respondents

Direction of Change. The information presented in Table 80 shows the relationship between the personal characteristics of standard hours respondents and their perceptions concerning the direction of changes in organizational performance. No significant relationships were found to exist between the following personal variables and perceptions concerning the direction of changes in organizational performance: Age, and Dependents requiring assistance before and after work.

However, some significant relationships were found for some of the organizational performance items and the remaining personal variables. A significant relationship was found between the sex of respondents and (17) Amount of Time spent with family (r=0.183), and (18) Amount of time spent with friends (r=0.180).

In addition significant relationships were found between the occupational category of respondents and 9 variables related to organizational performance: (2) Organization of your work (r=-0.227), (6) Degree of participation in decisions about work assignments (r= -0.242), (7) Degree of difficulty in scheduling work

Table 80

Correlation Co-efficients for Standard Hours Perceptions of Organizational Performance

Organizational Performance	Direction of Change																	
	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variables * 1	0.112	0.200	0.111	0.207	-0.168	0.054	0.188	0.312	0.114	0.194	0.112	0.203	0.072	0.413	0.151	0.084	0.201	0.041[a]
2	0.130	0.138	0.058	0.507	-0.227	0.009[b]	0.178	0.041	0.102	0.247	0.021	0.811	0.139	0.113	0.229	0.008[a]	0.128	0.194
3	0.161	0.065	0.119	0.174	-0.164	0.061	0.147	0.093	0.133	0.127	0.008	0.930	0.036	0.684	0.133	0.128	0.130	0.189
4	0.039	0.657	-0.002	0.981	-0.168	0.055	0.129	0.139	0.059	0.503	0.058	0.506	0.101	0.249	0.184	0.035[a]	0.090	0.365
5	-0.007	0.932	-0.042	0.630	-0.042	0.630	0.024	0.785	0.073	0.404	0.028	0.754	0.080	0.360	0.070	0.429	0.054	0.587
6	0.086	0.324	0.036	0.684	-0.242	0.005[b]	0.210	0.016	0.055	0.533	-0.000	0.997	0.125	0.153	0.212	0.015[a]	0.146	0.140
7	0.086	0.328	0.153	0.080	-0.240	0.006[b]	0.242	0.005[b]	0.054	0.540	0.118	0.178	0.077	0.383	0.227	0.009[b]	0.250	0.011[a]
8	0.091	0.297	0.032	0.717	-0.143	0.101	0.128	0.145	0.046	0.599	0.028	0.749	0.052	0.551	0.129	0.140	0.102	0.305
9	0.016	0.858	0.046	0.606	-0.144	0.099	0.084	0.340	0.018	0.834	-0.028	0.749	0.122	0.163	0.109	0.213	0.117	0.237
10	0.092	0.292	0.116	0.184	-0.168	0.054	0.187	0.032[a]	0.045	0.605	-0.053	0.547	0.160	0.068	0.164	0.060	0.131	0.184
11	0.142	0.104	0.124	0.157	-0.217	0.013[a]	0.213	0.014[b]	0.089	0.313	0.036	0.682	0.197	0.024	0.249	0.004[b]	0.052	0.598
12	-0.024	0.788	0.082	0.350	-0.235	0.007[b]	0.204	0.019[a]	0.026	0.767	0.082	0.351	0.079	0.370	0.220	0.011[a]	0.087	0.378
13	-0.040	0.646	0.068	0.440	-0.138	0.115	0.101	0.249	0.051	0.565	0.093	0.290	0.166	0.057	0.136	0.120	0.086	0.385
14	-0.011	0.905	0.052	0.555	-0.023	0.798	0.019	0.831	-0.000	0.997	0.150	0.085	0.054	0.538	-0.021	0.815	0.093	0.345
15	0.009	0.921	0.124	0.158	-0.168	0.054	0.199	0.022[a]	0.157	0.073	0.012	0.892	0.160	0.068	0.159	0.053	0.186	0.059
16	0.077	0.378	0.057	0.515	-0.292	0.001[a]	0.220	0.011[a]	0.179	0.040[a]	-0.028	0.750	0.145	0.097	0.256	0.003[b]	0.048	0.627
17	0.011	0.896	0.183	0.036[a]	-0.278	0.001[a]	0.248	0.004[b]	0.120	0.169	0.013	0.883	0.118	0.177	0.284	0.001[b]	0.194	0.048[a]
18	0.024	0.787	0.180	0.039[a]	-0.349	0.000[a]	0.271	0.002[a]	0.133	0.128	0.022	0.806	0.177	0.042[a]	0.334	0.000[b]	0.097	0.329
19	0.006	0.947	0.101	0.250	-0.276	0.001[a]	0.198	0.023[b]	0.090	0.305	-0.046	0.604	0.176	0.044[a]	0.233	0.006[b]	-0.042	0.667

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

requiring others (r=-0.240), (11) Desirability of respondents branch as a place to work (r=-0.217), and (12) Degree of fatigue associated with your daily work assignments (r=-0.235).

Furthermore, a significant relationship was found between the occupational classification of respondents and each of the four variables included in the factor family interaction and personal relationships: (16) Management of your family affairs (r=-0.292), (17) Amount of time spent with family (r=-0.278), (18) Amount of time spent with friends(r=-0.349) and (19) Time available to organize your personal business affairs (r=-0.276).

In addition a significant relationship was found to exist between the income level of respondents and 9 of the organizational performance items: (7) Degree of difficulty in scheduling work requiring others (r=0.242), (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.187), (11) Desirability of respondents department as a place to work (r=0.213), (12) Degree of fatigue associated with your daily work assignments (r=0.204), and (15) The availability of services such as dining rooms, elevators and cafeterias (r=0.199).

Also a significant relationship was found to exist between each of the four items related to the factor family interaction and personal relationship and the income level of respondents: (16) Management of your family affairs (r=0.220), (17) Amount of time spent with family (r=0.248), (18) Amount of time spent with friends (r=0.271) and (19) Time available to organize your personal business affairs (r=0.198).

Alternatively, the marital status of respondents was also found to be significantly related to one organizational performance variable, namely (16) Management of your family affairs (r=0179).

Similarly, only two variables were found to be significantly related to the size of the respondents family: (18) Amount of time spent with your friends (r=0.177) and (19) Time available to organize your personal business affairs (r=0.176).

On the other hand, the educational background of respondents was found to be significantly related to 10 of the organizational performance items at the .05 level of significant: (2) Organization of your work (r=0.229), (4) Your overall work performance (r=0.184), (6) Degree of participation in decisions about work assignments (r=0.212), (7) Degree of difficulty in scheduling work requiring others (r=0.227), (11) Desirability of respondents branch as a place to work (r= 0.249), and (12) Degree of fatigue associated with your daily work assignments (r=0.220). Also, the educational experience of respondents was found to be significantly related to each of the four items included in the factor family interaction and personal relationships:

(16) Management of your family affairs (r=0.256), (17) Amount of time spent with family (r=0.284), (18) Amount of time spent with friends (r=0.334) and (19) Time available to organize your personal business affairs (r=0.233).

Finally, the employment status of the spouse of the respondents was found to be significantly related to three organizational performance items: (1) Travel to and from work (r=0.201), (7) Degree of difficulty in scheduling work requiring others (r=0.250), and (17) Amount of time spent with family (r=0.194).

Importance of Change. The information presented in Table 81 showed the relationship between the personal characteristics of Standard Hours respondents and their perceptions concerning the importance of changes in organizational performance.

No significant relationship were found to exist between perceptions of the importance of change and two of the personal variables: Age, and Respondents who had dependents requiring assistance before and after work.

For many of the remaining personal varibles a large number of significant relationships were obtained.

First, a significant relationship was found to each between the sex of respondents and four organizational performance items: (12) Degree of fatigue associated with your daily work assignments (r=0.213), (13) The service your

Table 61

Correlation Co-efficients for Standard Hours Perceptions of Organizational Performance

Organizational Performance	Importance of Change																	
	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variables* 1	0.010	0.906	0.036	0.525	-0.241	0.006^b	0.212	0.015	0.210	0.016	-0.012	0.891	0.120	0.169	0.195	0.022^a	-0.016	0.874
2	-0.033	0.707	0.104	0.234	-0.299	0.000^b	0.237	0.006^b	0.073	0.406	-0.084	0.336	0.158	0.070	0.267	0.002^b	0.094	0.345
3	0.004	0.962	0.134	0.124	-0.260	0.003^b	0.257	0.003^b	0.102	0.246	-0.064	0.466	0.179	0.040^a	0.275	0.001^b	0.136	0.169
4	-0.019	0.826	0.036	0.679	-0.258	0.003^b	0.160	0.067	0.173	0.047^a	-0.115	0.188	0.168	0.055	0.244	0.005^b	-0.040	0.658
5	0.063	0.475	0.041	0.641	-0.233	0.007^b	0.230	0.008^b	0.197	0.024^a	-0.089	0.309	0.205	0.018^a	0.234	0.007^b	0.037	0.712
6	0.065	0.457	0.085	0.336	-0.299	0.001^b	0.248	0.004^b	0.214	0.014^a	0.020	0.822	0.147	0.094	0.332	0.000^b	0.130	0.189
7	0.031	0.726	0.135	0.124	-0.310	0.000^b	0.244	0.005^b	0.203	0.019^a	-0.006	0.942	0.183	0.036^a	0.215	0.014^a	0.105	0.269
8	0.049	0.579	0.075	0.391	-0.230	0.008^b	0.174	0.046^b	0.168	0.055	-0.117	0.180	0.179	0.040^a	0.267	0.002^b	-0.045	0.650
9	0.062	0.482	0.053	0.548	-0.237	0.006^b	0.196	0.024^a	0.171	0.050^a	-0.040	0.649	0.136	0.121	0.224	0.010^b	0.013	0.593
10	-0.025	0.773	0.000	1.000	-0.130	0.136	0.079	0.367	0.087	0.324	0.034	0.698	0.067	0.451	0.119	0.175^a	-0.011	0.911
11	0.005	0.953	-0.002	0.983	-0.257	0.003^b	0.185	0.034^a	0.146	0.096	-0.040	0.649	0.192	0.028^a	0.272	0.001^b	0.059	0.554
12	0.155	0.076	0.158	0.070	-0.288	0.001^b	0.265	0.002^b	0.135	0.122	0.037	0.671	0.167	0.056	0.296	0.001^b	0.089	0.371
13	0.090	0.304	0.213	0.014^a	-0.314	0.000^b	0.282	0.001^b	0.082	0.352	0.058	0.506	0.177	0.042^a	0.331	0.000^b	0.114	0.249
14	0.133	0.129	0.185	0.033^a	-0.309	0.000^b	0.318	0.000^b	0.168	0.054	0.047	0.596	0.202	0.020^a	0.315	0.000^b	0.128	0.195
15	0.131	0.134	0.144	0.099	-0.237	0.006^b	0.264	0.002^b	0.159	0.068	0.034	0.702	0.139	0.112	0.248	0.004^b	0.087	0.378
16	0.043	0.628	0.204	0.019^a	-0.284	0.001^b	0.205	0.018^a	0.202	0.020^a	0.024	0.783	0.174	0.046^a	0.213	0.014^a	0.053	0.595
17	0.005	0.955	0.097	0.267	-0.241	0.005^b	0.135	0.123	0.210	0.016^a	0.068	0.442	0.134	0.125	0.160	0.067	0.050	0.419
18	-0.007	0.935	0.143	0.103	-0.264	0.002^b	0.170	0.052	0.190	0.029^a	0.038	0.665	0.205	0.019^a	0.173	0.047^a	0.047	0.633
19	0.077	0.384	0.183	0.036^a	-0.248	0.004^b	0.200	0.021^a	0.197	0.023^a	0.024	0.786	0.150	0.085	0.175	0.045^a	0.141	0.154

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

branch provides to other branches (r=0.185), (15) The availability of services such as dining rooms, elevators, and cafeterias (r=0.204), and (19) Time available to organize your personal business affairs (r=0.183).

Secondly, the occupational classification of respondents was found to be significantly associated with 18 of the 19 organizational performance items, including the following: (1) Travel to and from work (r=0.241), (2) Organization of your work (r=-0.299), (3) Availability of office equipment (r=-0.260), (4) Your over-all work performance (r=-0.258), (5) Availability of people with whom you must work (r=-0.233), (6) Degree of participation in decisions about work assignments (r=0.299), (7) Degree of difficulty in scheduling work requiring others (r=-0.310), (8) Quality of communication about work assignments (r=-0.230), (9) Ability to arrange meetings with others when necessary (r=0.237), (11) Desirability of respondent's Department as a place to work (r=0.130), (12) Degree of fatigue associated with your daily work assignments (r=-0.288), (13) The service your department provides to other departments (r=-0.314), (14) The service your department provides to the public (r=-0.309), (15) The availability of services such as dining rooms, elevators and cafeterias (r=-0.227).

The occupational classification of respondents was also found to be significantly associated with their perception of the 4 items included in the factor concerning fairly interaction and personal relationships: (16) Management of your family affairs (r=-0.234), (17) Amount of time spent with family (r=-0.241), (18) Amount of time spent with friends (r=-0.264), (19) Time available to organize your personal business affairs (r=-0.248).

Similarly, the income level of respondents was found to be significantly associated with 14 of the 19 items related to organizational performance, including the following: (2) Organization of your work (r=0.237), (3) Availability of office equipment (r=0.257), (5) Availability of people with whom you must work (r=0.230), (6) Degree of participation in decisions about work assignments (r=0.248), (7) Degree of difficulty in scheduling work requiring others (r=0.244), (8) Quality of communication about work assignments (r=0.174), (9) Ability to arrange meetings with others when necessary (r=0.196), (11) Desirability of respondent's Department as a place to work (r=0.185), (12) Degree of fatigue associated with your daily work assignments (r=0.265), (13) The service your department provides to other departments (r=0.282), (14) The service your department provides to the public (r=0.318) (15) The availability of services such as dining rooms, elevators and cafeterias (r=0.264) (16) Management of your family affairs (r=0.205), and (18) Time available to organize your personal business affairs (r=0.200).

Furthermore, the marital status of respondents was found to be significantly related to perceptions of the importance of changes for the following aspects of organizational peformance. (1) Travel to and from work (r=0.210), (4) Your over-all work performance (r=0.173), (5) Availability of people with whom you must work (r=0.214), (6) Degree of participation in decisions about work assignments (r=0.203), (7) Degree of difficulty in scheduling work requiring others (r=0.168), (9) Ability to arrange meetings with others when necessary (r=0.087).

Also, the marital status of respondents was found to be significantly associated with all items included in the factor family interaction and personal relationships: (16) Management of your family affairs (r=0.202), (17) Amount of time spent with family (r=0.210), (18) Amount of time spent with friends (r=0.190), (19) Time available to organize your personal business affairs (r=0.197).

Similarly, the size of family of Standard Hours respondents was found to be significantly associated with 9 of the 19 items concerning perceptions of the importance of changes in organizational performance. These 9 variables included: (3) Availability of office equipment (r=0.179), (5) Availability of people with whom you must work (r=0.205), (7) Degree of difficulty in scheduling work requiring others (r=0.183), (8) Quality of communication about work assignments (r=0.179), (11) Desirability of respondent's Department as a place to work (r=0.192), (13) The service your department provides to other departments (r=0.177), (14) The service your department provides to the public (r=0.202), (16) Management of your family affairs (r=0.174), (18) Amount of time spent with friends (r=0.205).

Furthermore, the level of education of respondents was found to be significantly associated with 18 of the 19 items related to perceptions of the importance of changes in organizational performance, including the following: (1) Travel to and from work (r=0.199), (2) Organization of your work (r=0.267), (3) Availability of office equipment (r=0.275), (4) Your over-all work performance (r=0.244), (5) Availability of people with whom you must work (r=0.234), (6) Degree of participaton in decisions about work assignments (r=0.332), (7) Degree of difficulty in scheduling work requiring others (r=0.215), (8) Quality of communication about work assignments (r=0.267), (9) Ability to arrange meetings with others when necessary (r=0.224), (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.119), (11) Desirability of respondent's Department as a place to work (r=0.272), (12) Degree of fatigue associated with your daily work assignments (r=0.296), (13) The service your department provides to other departments (r=0.331), (14) The service your department provides to the public (r=0.315), (15) The availability of services such as dining rooms, elevators and cafeteria (r=0.248), (16) Management of your family affairs (r=0.213), (18) Amount of time spent with friends (r=0.173), (19) Time available to organize your personal business affairs (r=0.175).

On the other hand, the employment status of the respondents spouse was found to be significantly correlated with only one of the organizational performance variables, namely (18) Amount of time spent with friends (r=0.175)

Correlation Analyses for Compressed Hours Respondents

Direction of Change. An examination of Table 82 shows that very few significant correlations were found between the pesonal variables of the Compressed Hours respondents and their perceptions of changes in organizatonal performance.

The age of respondents was found to be significantly associated with only one variable, (11) the desirability of the respondents branch as a place to work (r=-0.408). Furthermore, the sex of respondents was only significantly related to two organizational performance items: (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.527), and (14) The service your department provides to the public (r=0.047).

Similarly, for the occupational classification of respondents a significant relatonship was found to exist for only one variable, (14) The service your department provides

Table 82

Correlation Co-efficients for Compressed Hours Perceptions of Organizational Performance

Organizational Performance	Direction of Change																	
	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variables *1	-0.078	0.648	-0.102	0.547	0.254	0.130	-0.007	0.969	0.048	0.777	0.183	0.278	-0.394	0.016	-0.211	0.211	-0.397	0.093
2	0.291	0.080	0.071	0.676	0.039	0.821	0.303	0.068	-0.188	0.266	0.264	0.113	-0.132	0.436	-0.034	0.841	0.241	0.320
3	0.088	0.604	0.075	0.659	0.217	0.197	-0.007	0.969	-0.012	0.942	0.488	0.002[b]	-0.061	0.721	-0.027	0.876	0.015	0.950
4	0.219	0.193	0.176	0.298	-0.051	0.765	0.270	0.107	-0.024	0.889	0.368	0.025[a]	0.088	0.604	-0.131	0.439	0.328	0.171
5	0.079	0.642	0.286	0.086	-0.168	0.319	0.364	0.027[a]	0.050	0.770	0.459	0.004[b]	0.007	0.967	0.144	0.394	0.536	0.018[a]
6	0.278	0.095	0.111	0.512	0.014	0.937	0.339	0.040[a]	0.085	0.619	0.236	0.160	-0.323	0.051	0.227	0.176	0.012	0.961
7	0.124	0.466	0.224	0.182	0.000	1.000	0.289	0.083	0.000	1.000	0.386	0.018[a]	-0.342	0.039[a]	0.167	0.325	0.164	0.450
8	0.222	0.187	0.040	0.815	0.083	0.625	0.199	0.237	-0.057	0.737	0.289	0.083	-0.136	0.421	-0.049	0.774	0.242	0.319
9	0.121	0.477	0.210	0.213	-0.119	0.482	0.198	0.241	-0.113	0.507	0.315	0.057	-0.136	0.424	0.128	0.452	0.390	0.099
10	0.322	0.052	0.527	0.001[b]	-0.236	0.160	0.421	0.010[a]	0.041	0.809	0.267	0.110	0.055	0.748	0.401	0.014[a]	0.527	0.020[a]
11	-0.408	0.012[a]	-0.181	0.285	0.079	0.641	-0.228	0.175	-0.137	0.418	0.314	0.059	0.020	0.909	-0.162	0.338	-0.275	0.255
12	-0.165	0.329	0.017	0.920	0.236	0.160	-0.036	0.835	0.190	0.269	0.172	0.308	0.187	0.268	-0.001	0.994	-0.224	0.358
13	-0.196	0.246	-0.263	0.115	0.263	0.115	-0.321	0.053	-0.307	0.065	0.379	0.021[a]	-0.128	0.450	-0.203	0.229	-0.217	0.323
14	-0.231	0.170	-0.329	0.047[a]	0.329	0.047[a]	-0.378	0.021[a]	-0.204	0.225	0.329	0.047[a]	-0.381	0.020[a]	-0.093	0.586	-0.459	0.049[a]
15	-0.067	0.695	0.019	0.119	0.261	0.912	-0.023	0.891	-0.118	0.485	0.350	0.034[a]	0.041	0.811	-0.211	0.210	0.015	0.950
16	-0.313	0.059	-0.103	0.232	0.201	0.543	-0.002	0.991	0.033	0.845	0.149	0.380	0.104	0.541	-0.473	0.003[b]	-0.185	0.453
17	-0.117	0.492	0.051	0.872	0.028	0.765	0.047	0.781	0.050	0.770	0.010	0.955	-0.053	0.754	-0.373	0.023[a]	0.162	0.506
18	-0.154	0.364	0.046	0.435	0.132	0.788	0.121	0.476	0.341	0.039[a]	0.196	0.246	-0.374	0.023[a]	-0.077	0.652	-0.128	0.601
19	0.063	0.713	0.272	0.285	-0.180	0.104	0.350	0.034[a]	0.302	0.069	0.122	0.473	-0.120	0.481	-0.179	0.290	0.336	0.159

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

to the public (r=0.329).

However, for the level of income of respondents significant relationship were found to exist for five of the organizational performance items: (5) Availability of people with whom you must work (r=0.364), (6) Degree of participation in decisions about work assignments (r=0.339), (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.421), (14) The service your department provides to the public (r=-0.378), (19) Time available to organize your personal business affairs (r=0.350).

On the other hand, the marital status of respondents was only found to be significantly associated with one variable relating to organizational performance, namely (18) The amount of time spent with friends (r=0.341).

Alternatively, a significant relationship was found to exist between respondents who had dependents requiring assistance before and after work and seven items concerning the direction of changes in organizatonal performance. These included: (3) Availability of office equipment (r=0.488), (4) Your over-all work performance (r=0.368), (5) Availability of people with whom you must work (r=0.459), (7) Degree of difficulty in scheduling work requiring others (r=0.386), (12) The service your department provides to other departments (r=0.172), (14) The service your department provides to the public (r=0.329), (15) The availability of services such as dining rooms, elevators and cafeterias (r=0.350).

In addition, a significant relatonship was found between the family size of Compressed Hours respondents and three organizaticnal performance items: (7) Degree of difficulty in scheduling work requiring others (r=-0.342), (14) The service your department provides to the public (r=-0.381), (18) Amount of time spent with friends (r=-0.374).

Similarly a significant relationship was found between the level of education of Compressed Hours respondents and three items related to changes in the direction of organizational performance: (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.401), (16) Management of your family affairs (r=-0.210), (17) Amount of time spent with family (r=-0.373).

Finally, the employment status of the spouse of these respondents was found to be significantly associated with three organizational performance items: (5) Availability of people with whom you must work (r=0.536), (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.527), (14) The service your department provides to the public (r=-0.459).

Importance of Change. An examination of Table 83 reveals that very few significant relationships were found between the personal variables of the Compressed Hours

Table 83

Correlation Co-efficients for Compressed Hours Perceptions of Organizational Performance

Organizational Performance		Importance of Change																	
		Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
		Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variable*	1	-0.372	0.023	-0.163	0.335	0.251	0.135	-0.227	0.177	-0.074	0.663	0.219	0.192	-0.358	0.030	-0.268	0.109	-0.260	0.282
	2	-0.217	0.198	0.113	0.504	-0.024	0.887	-0.047	0.784	0.199	0.239	0.039	0.820	-0.222	0.187	-0.158	0.350	0.059	0.809
	3	-0.234	0.164	0.124	0.466	0.056	0.743	0.000	1.000	0.139	0.413	0.075	0.659	-0.176	0.298	-0.194	0.249	0.046	0.552
	4	-0.208	0.218	0.078	0.648	0.009	0.956	0.006	0.973	0.127	0.454	0.164	0.331	-0.289	0.083	-0.069	0.637	-0.129	0.600
	5	-0.333	0.044[a]	0.033	0.849	0.053	0.754	-0.061	0.722	0.066	0.700	0.170	0.314	-0.209	0.215	-0.277	0.097	0.088	0.721
	6	-0.170	0.314	0.106	0.533	0.124	0.463	-0.133	0.433	-0.002	0.992	0.152	0.369	-0.183	0.278	0.054	0.751	0.108	0.640
	7	-0.233	0.166	0.086	0.613	-0.002	0.989	0.059	0.728	0.249	0.138	-0.016	0.927	-0.223	0.184	-0.279	0.094	-0.213	0.342
	8	-0.047	0.781	0.203	0.229	-0.024	0.887	0.293	0.079	0.408	0.012[a]	0.141	0.405	-0.264	0.114	-0.033	0.846	0.098	0.659
	9	-0.217	0.197	[illegible]	0.815	0.204	0.227	0.025	0.882	0.250	0.136	0.086	0.612	-0.301	0.071	-0.270	0.106	-0.375	0.113
	10	-0.211	0.210	-0.070	0.681	0.231	0.168	-0.011	0.947	0.185	0.274	0.110	0.517	0.135	0.425	-0.386	0.018[a]	-0.347	0.146
	11	-0.188	0.263	0.028	0.869	0.145	0.393	0.067	0.692	0.298	0.073	0.203	0.228	-0.294	0.077	-0.153	0.365	-0.128	0.601
	12	0.313	0.060	-0.106	0.531	0.234	0.164	0.133	0.433	-0.229	0.173	0.441	0.006[b]	-0.335	0.043[a]	0.041	0.812	0.108	0.659
	13	-0.216	0.199	-0.051	0.765	0.051	0.765	0.127	0.453	0.059	0.731	0.222	0.186	-0.143	0.398	-0.135	0.426	0.089	0.718
	14	0.195	0.247	-0.176	0.298	0.176	0.298	0.119	0.482	0.024	0.888	0.205	0.223	-0.073	0.668	-0.104	0.541	-0.151	0.537
	15	0.172	0.308	0.058	0.232	-0.058	0.732	0.142	0.403	-0.084	0.622	0.286	0.087	-0.099	0.560	0.207	0.220	0.278	0.250
	16	0.109	0.520	0.112	0.509	0.177	0.294	0.228	0.175	0.129	0.448	0.114	0.503	-0.155	0.361	-0.169	0.316	-0.017	0.946
	17	-0.236	0.159	0.054	0.750	-0.054	0.750	0.186	0.270	0.160	0.344	0.254	0.130	-0.033	0.847	-0.200	0.236	0.218	0.370
	18	0.011	0.948	0.379	0.021[a]	-0.224	0.182	0.375	0.022[a]	0.417	0.010[b]	0.058	0.735	-0.181	0.283	0.154	0.362	0.139	0.570
	19	-0.018	0.916	-0.008	0.964	0.008	0.964	0.144	0.395	0.196	0.245	0.269	0.107	-0.127	0.454	0.041	0.811	0.026	0.918

* See Variable Listing in Appendix.

[a] Significant at .05 level.

[b] Significant at .01 level.

respondents and their perceptions relating to the importance of any changes in organizaticnal performance since the adoption of the compressed work week system. No significant differences were found to exist between their perceptions of the importance of changes in organizational performance and the following two personal variables: Occupational category, and the Employment status of the respondents spouse.

Also few significant relationship were found for the remaining personal variables.

First, the age of Compressed Hours respondents was found to be significantly related to only one organizational performance variable, namely (5) Availability of people with whom you most work (r=-0.333).

Also the sex of respondents was found to be signficantly related to only one organizational performance item, (18) Amount of time spent with friends (r=0.379).

Similarly, only one significant relationship was found between the income level of respondents and these organizational performance variables. This was (18) Amount of time spent with friends (r=0.375).

Likewise, the martial status of respondents was only found to be significantly correlated with two organizational performance variables: (8) Quality of communication about work assignments (r=0.408), and (18) Amount of time spent with friends (r=0.417).

Furthermore, in the case of respondents who had dependents requiring assistance before and after work, only one significant correlation was found, which was (12) Degree of fatigue associated with your daily work assignments (r=0.441).

In addition only one significant association was found between the family size of respondents and these organizational perforaance variables, which was (12) Degree of fatigue associated with your daily work assignments (r=-0.335).

Finally, the level of education of the Compressed Hours respondents was also found to be significantly related to only one of these organizational performance variables. This was (10) Availability of others for 'spur of the moment' discussions or phone calls (r=-0.386).

Correlation Analyses for Flexible Hours Respondents

Direction of Change. Table 84 shows that few significant correlations were obtained between the personal variables of the Flextime respondents and their perceptions of the direction of any changes in organizational performance since the adoption of their flextime structure. No significant correlations were obtained between the organizational performance items and three of the personal variables: Marital status, Family size and the Employment

Table 84

Correlation Co-efficients for Flexible Hours Perceptions of Organizational Performance

Direction of Change

Organizational Performance	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variables * 1	0.106	0.111	-0.088	0.187	-0.154	0.020[a]	-0.089	0.181	-0.052	0.435	-0.001	0.987	-0.007	0.912	-0.234	0.000[b]	-0.028	0.738
2	0.226	0.001[b]	-0.025	0.707	-0.191	0.004[b]	-0.058	0.383	-0.012	0.863	0.137	0.039[a]	-0.024	0.723	-0.148	0.027	0.067	0.431
3	0.133	0.047[a]	0.086	0.197	-0.110	0.098	0.001	0.984	-0.038	0.570	0.041	0.539	-0.032	0.635	-0.106	0.112	-0.046	0.588
4	0.204	0.002b	0.068	0.307	-0.137	0.039	-0.014	0.832	-0.033	0.6[illegible]0	0.080	0.232	0.059	0.379	-0.125	0.061	0.089	0.294
5	0.151	0.023[a]	0.191	0.004[b]	-0.158	0.017	0.157	0.018[a]	0.109	0.1[illegible]	-0.104	0.119	0.114	0.089	0.073	0.273	0.127	0.131
6	0.093	0.164	0.090	0.175	-0.025	0.714	0.057	0.393	0.027	0.68[illegible]	-0.009	0.891	0.086	0.199	0.003	0.960	-0.020	0.813
7	0.163	0.014[a]	0.211	0.001[b]	-0.175	0.008[a]	0.165	0.013[a]	0.012	0.856	-0.019	0.777	0.100	0.135	0.079	0.236	0.105	0.212
8	0.129	0.053	0.141	0.034[a]	-0.133	0.046	0.084	0.210	-0.004	0.959	-0.033	0.621	0.082	0.215	0.023	0.735	0.024	0.781
9	0.222	0.000[b]	0.151	0.023	-0.101	0.128	0.120	0.072	0.019	0.777	-0.108	0.105	0.123	0.069	-0.005	0.943	0.062	0.461
10	0.191	0.004[b]	0.142	0.033	-0.076	0.254	0.141	0.034[a]	0.107	0.109	-0.076	0.256	0.052	0.440	0.055	0.409	0.098	0.247
11	0.107	0.108	0.055	0.413	-0.136	0.040[a]	-0.023	0.676	-0.077	0.249	-0.003	0.963	-0.020	0.762	-0.079	0.238	0.039	0.647
12	0.106	0.111	-0.036	0.591	-0.152	0.023	-0.085	0.204	-0.082	0.221	0.011	0.871	0.048	0.472	-0.158	0.018	0.011	0.897
13	0.135	0.043[a]	0.070	0.291	-0.103	0.123	0.061	0.360	-0.001	0.983	-0.017	0.801	0.002	0.971	-0.001	0.993	-0.004	0.959
14	0.103	0.123	0.070	0.294	-0.140	0.035	-0.015	0.823	-0.018	0.786	0.044	0.508	0.020	0.761	-0.073	0.274	0.082	0.335
15	0.089	0.182	0.011	0.867	-0.134	0.044[a]	-0.069	0.303	-0.093	0.162	-0.022	0.738	0.033	0.621	-0.197	0.003[b]	-0.024	0.779
16	0.042	0.526	0.027	0.691	-0.112	0.093	-0.010	0.884	0.001	0.994	0.020	0.760	0.011	0.866	-0.106	0.113	-0.146	0.084
17	0.114	0.089	0.030	0.652	-0.067	0.317	0.028	0.676	0.029	0.663	0.075	0.262	-0.046	0.495	-0.030	0.656	0.015	0.859
18	0.102	0.125	0.086	0.197	-0.086	0.198	0.031	0.646	-0.015	0.821	-0.006	0.929	0.018	0.794	-0.060	0.369	-0.106	0.210
19	0.144	0.030[a]	0.063	0.349	-0.097	0.145	0.027	0.686	0.006	0.925	0.088	0.185	-0.047	0.479	-0.073	0.272	-0.025	0.769

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

status of the respondent's spouse.

However, the age of respondents was found to be significantly associated with perceptions of the direction of changes in 9 of the 19 items: These included the following: (2) Organization of your work (r=0.226), (3) Availability of office equipment (r=0.133), (4) Your overall work performance (r=0.204), (5) Availability of people with whom you must work (r=0.151), (7) Degree of difficulty in scheduling work requiring others (r=0.163), (9) Ability to arrange meetings with others when necessary (r=0.222), (13) The service your department provides to other departments (r=0.135), (19) Time available to organize your personal business affairs (r=0.144).

On the other hand, a significant relationship was found to exist between the sex of flextime respondents and only three of the organizational performance items: (5) Availability of people with whom you must work (r=0.191), (7) Degree of difficulty in scheduling work requiring others (r=0.211), and (8) Quality of communication about work assignments (r=0.141).

Similarly the occupational classification of respondents was also only found to be significantly correlated with three organizational performance items: (1) Travel to and from work (r=-0.154), (2) Organization of your work (r=-0.191) and (7) Degree of difficulty in scheduling work requiring others (r=-0.175).

In addition three significant relationships were found to exist between the level of income of respondents and these organizational performance variables: (5) Availability of people with whom you must work (r=0.157), (7) Degree of difficulty in scheduling work requiring others (r=0.165) and (10) Availability of others for 'spur of the momement' discussicns or phone calls (r=0.141).

Furthermore, only one significant correlation was found to exist between respondents who had dependents requiring assistance before and after work, and these organizational performance variables. This was (2) Organization of your work (r=0.137).

Finally, the level of education of the Flextime respondents was found to be significantly correlated with two organizational performance items: (1) Travel to and from work (r=-0.234) and (15) The availability of services such as dining rooms, elevators and cafeterias (r=-0.197).

Importance of Change. Table 85 shows the significant relationships between the personal variables of the flextime respondents and their perceptions relating to the importance of changes in organizational performance since their adoption of the flextime structure. No significant relationships were found for the following two personal variables: Level of education, and the employment status of the respondents spouse.

Table 85

Correlation Co-efficients for Flexible Hours Perceptions of Organizational Performance

Organizational Performance	Age		Sex		Occupational Category		Income		Marital Status		Dependents Requiring Assistance		Family Size		Level of Education		Employment of Spouse	
	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.	Pearson	Prob.
Variables* 1	0.122	0.068	0.181	0.006	-0.130	0.051	0.131	0.049	0.061	.363	-0.077	0.247	0.099	0.185	0.033	0.619	-0.000	1.000
2	0.154	0.021[a]	0.062	0.352	-0.007	0.920	0.053	0.429	0.028	0.678	-0.001	0.992	0.059	0.382	-0.219	0.743	-0.067	0.426
3	0.174	0.009[b]	0.210	0.002[b]	-0.126	0.058	0.197	0.003[b]	0.093	0.163	-0.053	0.428	0.068	0.310	0.079	0.235	0.041	0.626
4	0.112	0.092	0.066	0.324	-0.084	0.210	0.071	0.287	-0.007	0.918	-0.008	0.907	0.028	0.681	0.002	0.972	-0.041	0.625
5	0.161	0.015[a]	0.072	0.280	-0.028	0.672	0.062	0.351	0.017	0.795	-0.052	0.439	0.017	0.801	-0.007	0.915	0.026	0.763
6	0.150	0.024[a]	0.173	0.009[b]	-0.036	0.595	0.145	0.030[a]	0.117	0.079	-0.027	0.691	0.107	0.110	0.074	0.266	0.079	0.349
7	0.182	0.006[b]	0.103	0.123	-0.120	0.070	0.033	0.619	0.005	0.941	0.019	0.775	-0.007	0.919	-0.055	0.414	0.102	0.226
8	0.098	0.144	0.027	0.690	-0.047	0.479	-0.009	0.894	-0.009	0.897	0.033	0.619	0.002	0.972	-0.079	0.239	0.048	0.573
9	0.117	0.078	0.034	0.608	-0.107	0.107	0.046	0.488	0.015	0.820	-0.049	0.465	-0.002	0.982	0.009	0.893	-0.058	0.299
10	0.147	0.028[a]	0.086	0.198	-0.091	0.172	0.040	0.549	-0.030	0.654	-0.051	0.449	0.073	0.272	-0.031	0.647	0.022	0.792
11	0.020	0.760	0.139	0.037[a]	-0.084	0.206	0.096	0.152	0.097	0.144	-0.076	0.254	0.110	0.099	-0.013	0.842	0.066	0.438
12	0.188	0.005[b]	0.028	0.678	-0.256	0.000[b]	0.066	0.324	0.001	0.988	0.068	0.310	-0.002	0.977	-0.061	0.361	0.055	0.516
13	0.109	0.103	0.124	0.062	-0.217	0.001[b]	0.105	0.116	0.055	0.41[illegible]	0.069	0.300	0.021	0.751	0.017	0.795	-0.030	0.725
14	0.158	0.017[a]	0.175	0.008[b]	-0.158	0.017[a]	0.155	0.020[a]	0.166	0.012[a]	-0.152	0.022[a]	0.210	0.002[b]	0.089	0.184	0.091	0.280
15	0.126	0.058	0.058	0.386	- .258	0.000[b]	0.090	0.177	0.067	0.319	-0.048	0.470	0.147	0.027[a]	-0.015	0.822	0.136	0.107
16	0.152	0.022[a]	0.110	0.099	-0.099	0.136	0.033	0.625	-0.017	0.800	0.123	0.065	-0.026	0.698	-0.085	0.202	0.002	0.983
17	0.080	0.229	0.158	0.017	-0.069	0.299	0.088	0.186	0.000	0.996	0.138	0.038[a]	-0.016	0.812	0.009	0.885	0.016	0.854
18	0.077	0.250	0.104	0.118	-0.056	0.400	0.044	0.514	0.053	0.431	0.006	0.929	0.043	0.524	-0.028	0.673	0.041	0.630
19	0.109	0.104	0.146	0.028[a]	-0.170	0.010[b]	0.169	0.011[a]	0.123	0.064	0.036	0.592	0.018	0.789	0.082	0.221	0.053	0.532

Importance of Change

* See Variable Listing in Appendix.

a Significant at .05 level.

b Significant at .01 level.

However, a significant relationship was found between the age of respodents and 9 of these organizational performance variables. These included: (2) Organization of your work (r=0.154), (3) Availability of office equipment (r=0.174), (5) Availability of people with whom you must work (r=0.161), (6) Degree of participation in decisions about work assignments (r=0.150), (7) Degree of difficulty in scheduling work requiring others (r=0.182), (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.147), (12) Degree of fatigue associated with your daily work assignments (r=0.188), (14) The service your department provides to the public (r=0.158), (16) Management of family affairs (r=0.152).

Furthermore, the sex of respondents was found to be significantly associated with perceptions for five of the organizational performance items: (3) Availability of office equipment (r=0.210), (6) Degree of participation in decisions about work assignments (r=0.173), (11) Desirability of respondent's Department as a place to work (r=0.139) (14) The service your department provides to the public (r=0.175), (19) Time available to organize your personal business affairs (r=0.146).

Also the occupational category of respondents was found to be significantly related to five of the organizaticnal performance items: (12) Degree of fatigue associated with your daily work assignments (r=-0.256), (13) The service your branch provides to other branches (r=-0.217), (14) The service your branch provides to the public (r=-0.158), (15) The availability of services such as dining rooms, elevators and cafeterias (r=-0.099) and (19) Time available to organize your personal business affairs (r=-0.170).

Similarly the income level of respondents was also found to be significantly related to four organizational performance items, which were: (3) Availability of office equipment (r=0.197), (6) Degree of participation in decisions about work assignments (r=0.145), (14) The service your department provides to the public (0.155) and (19) Time available to organize your personal business affairs (r=0.269).

Alternatively the martical status of respondents was only found to be significantly correlated with one item, namely (14) The service your department provides to the public (r=0.166).

Similarly, for respondents who had dependents who required assistance before and after work only two significant correlations were obtained: (14) The service your department provides to the public (r=-0.152) and (7) Amount of time spent with family (r=0.238).

Finally, the family size of respondents was also found tc only be significantly correlated with two organizational performance variables: (14) The service your department provides to the public (r=0.210) and (15) The availability of services such as dining rooms, elevators and cafeterias (r=0.147).

Summary. Generally it was found in most cases that the personal characteristics of respondents employed in these three workweek structures were not significantly related to their perceptions of job satisfaction and organizational performance.

Where significant correlations were established in most cases the level of correlation was extremely low.

Job Satisfaction

Standard Hours Group. In only four cases did the obtained level of correlation exceed .40. These instances were: The relationship between the occupational classification of respondents and (4) The freedom they have to decide when they will arrive and depart from work (r=0.575), and (5) The way your immediate supervisor is administering the program (r=0.408).

In addition the income level of respondents was found to be significantly correlated with (4) The freedom they have to decide when they will arrive and depart from work (r=-0.402).

Finally the level of education of respondents was also found to be significantly related to (4) the freedom they have to decide when they will arrive and depart from work (r=-0.499).

Compressed Hours Group. For this group in only three instances did the obtained correlation co-efficient exceed .40. First, the age of respondents was found to be significantly correlated with (8) Changes which have occurred in the way work is done (r=-0.498) and (9) The way you now organize and complete your work (r=-0.526).

Secondly, for respondents who had dependents requiring assistance before and after work a significant relationship was found for (6) The arrangements you have to travel to and from work (r=0.425).

Flexible Hours Group. None of the obtained correlation co- efficients exceeded .40.

Organizational Performance

1. Direction of Change

Standard Hour Group. For this group none of the obtained correlation co-efficients exceeded .40, although many significant correlations were obtained.

Compressed Hours Group. For correlations concerning personal variables and the direction of change 8 correlations were obtained that exceeded a .40 level. First the age of respondents was significantly related to (11)

Desirability of respondents branch as a place to work (r=-0.408). Secondly, the sex of respondents was significantly correlated with (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.527).

Thirdly, the income level of respondents was also significantly correlated with (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.421).

Fourthly, whether or not respondents had dependents requiring assistance before and after work was found to be significantly correlated with (3) Availability of office equipment (r=0.488) and (5) Availability of people with whom you must work (r=0.459).

Fifthly, the level of education of Compressed Hours respondents was significantly related to (10) Availability of others for 'spur of the moment' discussion or phone calls (r=0.401).

Finally, the employment status of the spouse of respondents was found to be significantly related to (5) Availaibility of people with whom you must work (r=0.536), (10) Availaibility of others for 'spur of the moment' discussions or phone calls (r=0.527) and (14) The service your department provides to the public (r=-0.459).

Flexible Hours Group. None of the obtained correlation co-efficients concerning the relationship between personal variables and the direction of change in organizational perforaance exceeded the .40 level.

Organizational Performance

2. Importance of Change

Standard Hours Group. No significant correlation exceeding the .40 level were obtained between the personal variables relating to this group and their perceptions concerning the importance of any changes in organizational performance.

Compressed Hours Group. Only two of the obtained correlation co-efficient for this group exceeded the .40 level.

It was found that the marital status of respondents was significantly related to (18) The amount of time spent with friends (r=0.417). Furthermore for respondents who had dependents requiring personal assistance before and after work a significant relationship was found with (12) Degree of fatigue associated with your daily work assignments (r=0.441).

Flexible Hours Group. None of the obtained correlation co-efficients for this group exceeded the .40 level.

CHAPTER SUMMARY

This chapter examined inter-group comparisons of mean responses between management and non-management personnel concerning their perceptions of job satisfaction and organizational performance.

First, it was found that few significant differences were obtained between management and non-management means relating to perceptions of job satisfaction and organizational performance among the two innovative groups.

Secondly, correlation co-efficients were obtained for the personal characteristics of respondents and their perceptions of job satisfaction and organizational performance. Here again few correlation co-efficients were obtained that were higher than .40, although many significant correlations were obtained that were less than .40.

The following chapter continues with inter-group comparisons of data gathered for this study.

Chapter 7

RESEARCH FINDINGS: INTRAGROUP COMPARISON OF ALTERATIONS IN THE WORKWEEK AND ORGANIZATIONAL CHANGE

This is the second of two chapters that focus upon intra-group analysis of the effects of innovations in the management of time.

The first section of this chapter examines organizational changes within the flextime sub-population examining factors such as changes in the pattern of working hours, and changes in operational costs.

Secondly, this chapter analyzed some aspects of organizational change associated with the introduction of the Compressed workweek such as changes in the patterns of working hours, operational costs and consumption spending patterns and child minding problems.

Finally, this chapter presents an examination of the standard hours respondents perception of the limitations of various in the allocation of time.

CHANGES IN THE PATTERN OF HOURS OF WORK AND THE FLEXTIME CONCEPT

Although there is some slight variation in the application of the flextime concept across the various branches of the Department of Education a summary of the major characteristics of this model is presented in Figure 22.

The implementation of the flextime concept across these various branches has also been associated with a number of changes concerning the hours of work of employees that need to be recognized if organizational communication and work scheduling is to be effective. The major findings are discussed in the following section of this chapter.

Selection of Hours of Work

It was found that there was some variation among the branches employing the flextime model regarding the methods they have employed to select the hours of work within their various organizational units. The most common method used to determine working hours under this flextime model was for the employee to determine his own hours of work within a particular branch.

However, in approximately one third of the reported cases this decision involved prior consultation with the employees supervisor. This information is presented in Table 86.

Commencement of Working Hours

The implementation of flextime in these branches has also been associated with a number of changes concerning the

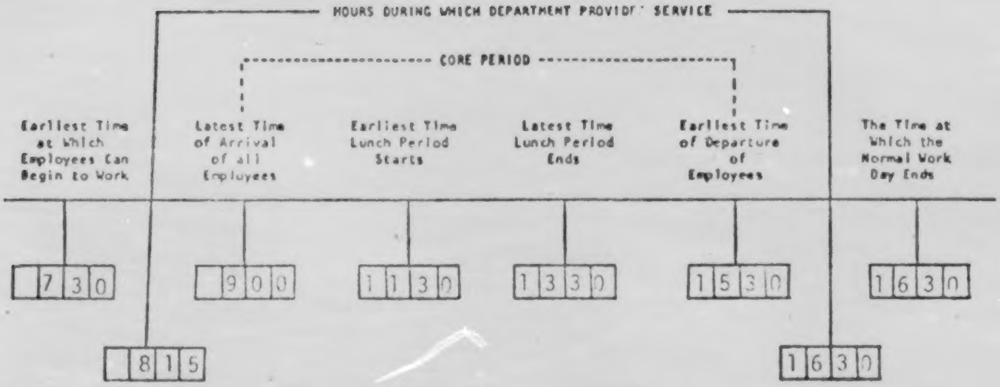

HOURS DURING WHICH DEPARTMENT PROVIDES SERVICE
CORE PERIOD
Earliest Time at Which Employees Can Begin to Work
Latest Time of Arrival of all Employees
Earliest Time Lunch Period Starts
Latest Time Lunch Period Ends
Earliest Time of Departure of Employees
The Time at Which the Normal Work Day Ends
730
900
1130
1330
1530
1630
815
1630

Figure 22

Utilization of Flextime Model

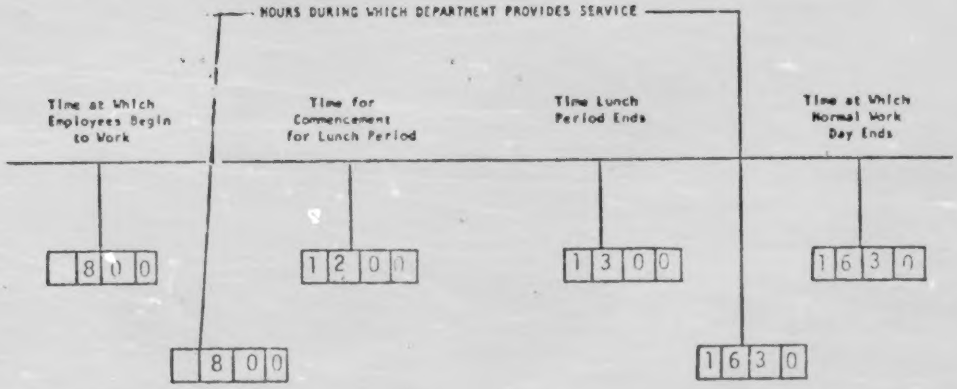

HOURS DURING WHICH DEPARTMENT PROVIDES SERVICE
Time at Which Employees Begin to Work
Time for Commencement for Lunch Period
Time Lunch Period Ends
Time at Which Normal Work Day Ends
800
1200
1300
1630
800
1630

Figure 23

Utilization of Compressed Workweek Model

Table 86

Frequency and Percentage Distribution for Method used to Select Hours of Work for Flextime Respondents

Method	f	%
(1) By yourself	134	61.2
(2) In consultation with supervisor	76	34.7
(3) Selection made by supervisor alone	9	4.1
N	219	100

time of departure of employees from their home, and their time of arrival at work.

Departure from Home. A summary of the model responses concerning the times of departure of employees from home before and after the introduction of flextime is presented in Table 87.

Thus it can be seen that the major change was that since the introduction of flextime 30.4 percent of respondents depart from home before 7:15 a.m., as compared to 13.8 percent of respondents prior to the introduction of flextime.

Arrival at Work. Furthermore, a considerable change was found concerning the times that employees commence work since the introduction of flextime. It was found that prior to the implementation of flextime only 21.7 percent of the

Table 87

Distribution of Modal Responses for Comparison of Departure Times from Home Pre and Post Flextime

Model Responses	Pre flextime f	Pre flextime %	Post flextime f	Post flextime %
7:00 a.m.	6	3.4	17	8.5
7:00 a.m.	10	5.5	24	11.9
7.15 a.m.	9	5.0	20	10.0
7:30 a.m.	41	22.7	33	16.4
7:45 a.m.	52	28.7	30	14.9
8:00 a.m.	30	16.6	24	11.9
N	179	--	199	--

respondents arrived at work before 8:00 a.m. However since the introduction of flextime approximately 54.1 percent of respondents now arrive at work before 8:00 a.m. This information presented in Table 88.

Further investigation revealed that the most important reason provided by 36.6 percent of respondents to explain the above changes in their time of commencement of working activities was that flextime enabled them to make adjustments in their time schedules to better accommodate changes in family and personal needs. However 19.4 percent of the respondents emphasized that improved travel to work was an important motive underlying this change, and a further 21.8 percent of the respondents emphasized that

Table 88

Frequency and Percentage Distribtuion for the Comparison of Arrival Times at Work Pre and Post Flextime

Time	Pre flextime		Post flextime	
	f	%	f	%
7:00 a.m.	1	0.5	1	0.5
7-8:00 a.m.	39	21.7	113	54.1
8:00 a.m.	142	77.8	88	45.4
N	182	100	202	100

these changes were beneficial to the work situation. A summary of these findings is presented in Table 89. It should be noted that in only 3.2 percent of the reported cases was this change initiated by the demands of the employees supervisor.

Commencement and Termination of Lunch Hours

The implementation of flextime in these branches was also found to be associated with a number of changes concerning the commencement and terminaton of lunch hours of employees.

Commencement of Lunch Break Table 90 shows that prior to the introduction of flextime 95.2 percent of respondents commenced their lunch hour at 12 noon. However

Table 89

Frequency and Percentage Distribution of the Motives Underlying Changes in Work Commencement Times for Flextime Respondents

Motive	f	%
To improve travel to work	42	19.4
To accommodate changes in family and personal needs	79	36.6
To accommodate the work situation	47	21.8
Requirements of supervisor	7	3.2
No changes	41	19.0
N	216	100

since the implementation of flextime their has been a considerable change in the range of hours during which employees take their lunch break, as only 64.4 percent of respondents now commence their lunch break at 12 noon.

Termination of Lunch Period. Similarly, the information presented in Table 91 shows that since the introduction of flextime their has been a considerable change in the times during which employees terminate their lunch periods. Prior to the implementation of flextime 87.00 percent of the respondents indicated that they completed their lunch hour at 13.00 hours. However since the implementation of flextime this figure has declined to 30.9 percent of the respondents.

Further analysis revealed that the most important

Table 90

Frequency and Distribution for the Comparison of Times for Commencement of Lunchbreak Pre and Post Flextime

Commencement of Lunch break	Preflextime f	%	Post Flextime f	%
11.00	2	1.0	1	0.5
11.30	5	2.7	21	10.4
11.45	-	-	13	6.4
11.50	-	-	3	1.5
11.50	-	-	3	1.5
12.00	175	95.2	130	64.4
12.10	-	-	1	0.5
12.15	2	1.1	7	3.5
12.30	-	-	18	8.9
12.45	-	-	2	1.0
13.00	-	-	3	1.5
N	184	100	202	100

reason given by 45.8 percent of the respondents for changing the time they commence their lunch period since the introduction of flextime was so that they could better satisfy personal needs. However 22.7 percent of the respondents emphasized that an important motive underlying this change was their desire to accommodate the needs of the work situation. This information is presented in Table 92.

Termination of Working Hours

The introduction of flextime in these branches have

Table 91

Frequency and Percentage Distribution for the Comparison of Times for Termination of Lunch Breaks Pre and Post Flextime

Termination of Lunch Break	Pre Flextime f	%	Post Flextime f	%
12.00	2	1.1	15	7.6
12.10			1	0.5
12.15			9	4.5
12.25			1	0.5
12.30	13	7.1	82	41.4
12.34	3	1.6	13	6.6
12.50			1	0.5
13.00	161	87.5	61	30.9
13.15	2	1.0	6	3.0
13.20			1	0.5
13.30	3	1.6	7	3.5
14.30			1	0.5
N	184	100	198	100

also been associated with changes concerning the time employees depart from the worksite and arrive at home.

Departure from Work. An examination of the information contained in Table 93 showed that since the introduction of flextime, employees have initiated considerable changes concerning their departure times from work. Before the introduction of flextime only 4.2 percent

Table 92

Frequency and Percentage Distribution for the Motives Underlying Changes in Times for Commencement of Lunchbreak for Flextime Respondents

Motive	f	%
(1) To satisfy personal needs	99	45.8
(2) To be able to leave work earlier in the evening	21	9.7
(3) To accommodte the work situation	49	22.7
(4) Requirement of supervisor	3	1.4
(5) No change	44	20.4
N	216	100

of the respondents indicated that they departed from their worksite before 16.00 hours. However, after the introduction of flextime 46.5 percent of the respondents indicated that they departed from the worksite before 16:00 hours.

Arrival at Home. Similarly, changes were found concerning the times employees arrived at home before and after the introduction of flexible working hours. Table 94 showed that prior to the introduction of flextime only 3.4 percent of employees arrived at home before 16.30 hours. However, since the implementation of flextime 43.1 percent of respondents indicated that they now arrive home before 16:30 hours.

Summary. Thus, the foregoing analysis indicates that

Table 93

Frequency and Percentage Distrubtion for the Comparison of Departure Times from Worksite Pre and Post Flextime

Departure Times	Pre flextime f	Pre flextime %	Post Flextime f	Post Flextime %
< 16:00	8	4.2	101	46.5
16:01-16.15	5	2.7	11	5.5
16:16-16:30	154	83.2	54	27.0
16:31-16:45	1	0.5	4	2.0
16:46-17:00	10	5.4	20	10.00
17:01-17:15	1	0.5	1	0.5
17:16-17:30	3	1.6	6	3.0
> 17:30	3	1.5	3	1.5
N	185	100	200	100

the implementation of flextime on an experimental basis in these branches has been associated with considerable changes in employees patterns of working hours, that could effect organizational communication and work scheduling. Important changes were found to occur among the following aspects of the arrangements of working hours: departure from home; arrival at work; commencement of lunch break, termination of lunchbreak; departure from work; and arrival at home.

CHANGES IN THE PATTERN OF HOURS OF WORK AND THE COMPRESSED WORKWEEK

Table 94

Frequency and Percentage Distrubtion for the Comparison of Times Employees Arrive Home from Work, Pre and Post Flextime

Arrival Times	Pre Flextime		Post Flextime	
	f	%	f	%
< 16:30	6	3.4	85	43.1
16:31-16:45	27	15.3	16	8.1
16:46-17:00	61	33.5	47	23.9
17:01-17:15	34	19.3	16	8.1
17:16-17:30	39	22.0	16	8.1
17:31-17:45	1	0.6	8	4.1
17:45-18:00	3	1.7	3	1.5
> 18:00	3	1.8	5	2.5

A summary of the major characteristics of the compressed workweek model as implemented in the Finance, Statistics and Legislation Branch was presented in Figure 23 The implementation of this Compressed Workweek model has been associated with a number of changes concerning the pattern of working hours of respondents and the most important findings are presented in the following discussion. To facilitate effective work scheduling and organizational communicaton a clear understanding of any changes in the hours of work arising from this innovation is essential.

Selection of Hours of Work

It was found that in all cases, the hours of work for employees within this Compressed Hours branch were either selected directly by the supervisor, or in consultation with the supervisor. Thus many of the following changes concerning hours of work are the result of deliberate departmental planning rather than independent decisions of organizational members. This information is presented in Table 95.

Table 95

Frequency and Percentage Distribution for Methods
Used to Select Hours of Work for
Compressed Hours Respondents

Method	f	%
(1) By yourself	-	-
(2) In Consultation with supervisor	21	60
(3) Selection made by supervisor alone	14	40
N	35	100

Commencement of Working Hours.

Once the hours of work had been determined in conjunction with the desires of the supervisors in this branch, the implementation of the Compressed hours program had been associated with a number of changes in the patterns of working hours for Compressed Hour respondents.

Departure from Home. Table 96 showed a summary of the modal responses relating to the times respondents depart from home. The most important change evident from this table is that prior to the introduction of the Compressed Workweek 27.2 percent of respondents departed from home at or before 7:00 a.m. However, this percentage has increased to 41.8 percent of respondents since the introduction of the Compressed Hours system.

Table 96

Frequency and Percentage Distribution
of Modal Respondes for Comparison
of Departure Times from
Home Pre and Post Compressed
Workweek

Modal Responses	Pre Compressed Workweek		Post-Compressed Workweek	
	f	%	f	%
7:00	1	3.0	4	11.2
7:00	8	24.2	11	30.6
7:05	-	-	2	5.6
7:15	4	12.1	4	11.1
7:20	3	9.1	5	13.9
7:25	3	9.1	-	-
7:30	3	9.1	6	16.7
7:45	6	18.1	-	-

Arrival at Work. Furthermore, a considerable change was found concerning the times that employees commence work since the introduction of the Compressed Workweek. Prior to the introduction of the Compressed Workweek 38.2 percent of respondents arrived at work after 8:00 a.m. However, since the implementation of this Compressed Workweek model all respondents arrive at the worksite before to 8:00 a.m. This information is presented in Table 97.

Table 97

Frequency and Percentage Distribution
for the Arrival Times at Work
Pre and Post Compressed
Workweek

Time	Pre Compressed Workweek		Post Compressed Workweek	
	f	%	f	%
< 7:00	-	-	-	-
7:00-7:30 a.m.	6	17.6	8	22.9
7:31-8:00 a.m.	15	44.0	26	74.4
> 8:00 a.m.	13	38.2	-	-
N	34	100	34	100

Commencement and Termination of Lunch Hour

The implementation of a compressed workweek model in this branch was also found to be associated with a number of changes concerning the commencement and termination of lunch hours of employees.

Commencement of Lunchbreak. Table 98 showed that prior to the introduction of a compressed workweek 91.2 percent of respondents commenced their lunch hour at 12 noon. However since the compressed workweek has been introduced the incidence of staggered lunch periods is readily apparent as only 65.7 percent of respondents indicated that they commenced their lunchbreak at 12 noon. A further 28.6 percent of respondents noted that they commenced lunch at 12:30 p.m.

Table 98

Frequency and Percentage Distribution for the Comparison of Times for Commencement of Lunchbreak Pre and Post Compressed Work Week

Commencement of Lunch break	Pre Compressed Workweek		Post Compressed Workweek	
	f	%	f	%
11:30	2	5.8	2	5.7
12:00	32	94.1	23	65.7
12:30	-	--	10	28.6
N	34	100	35	100

Termination of Lunchbreak. Similarly, the information presented in Table 99 showed that since the introduction of the compressed workweek, their has been an important change in the times employees complete their lunchbreak. Prior to the implementation of the Compressed Hours model 94.1 percent of respondents terminated their lunchbreak at 13:00 hours. However, since the implementation of this innovation in time only 30.5 percent of respondents terminate their lunchbreak at 13:00 hours. It was found that 61.1 percent of respondents now terminate their lunchbreak at 12:30 hours.

Table 99

Frequency and Percentage Distribution for the Comparison of Times for the Termination of Lunchbreaks Pre and Post Compressed Workweek

Termination of Lunch Break	Pre Compressed Workweek		Post Compressed Workweek	
	f	%	f	%
12:00	1	2.9	2	5.6
12:30	2	2.9	22	61.1
13:00	32	94.1	11	30.5
13:30	-	-	1	2.0
N	34	100	36	100

Termination of Working Hours

Similarly, the introduction of a Compressed Hours system was found to be associated with changes concerning the times employees depart from their worksite and arrive at home.

Departure from work. An examination of the information contained in Table 100 indicated that since the introduction of a Compressed Hours system, there have been little change regarding departure times from work. Prior to the implementation of the Compressed Hours model 93.1 percent of respondents departed from the worksite at 16:30 hours. Since this innovation has been implemented this figure has remained fairly stable as now 98.5 percent of respondents leave at 16:35 hours.

Table 100

Frequency and Percentage Distribution for the Comparison of Departure Times from the Worksite Pre and Post Compressed Workweek

Departure Times	Pre Compressed Workweek		Post Compressed Workweek	
	f	%	f	%
16:30	32	94.1	-	-
16:35	-	-	34	94.5
16:50	1	2.9	1	2.8
17:30	1	2.9	1	2.8
N	34	100	36	100

Arrival at Home. Similarly, changes were found concerning the times respondents arrive at home since the introduction of this Compressed Hours system.

It was found that prior to the implementation of this innovation in time 63.6 percent of the respondents arrived at home before 17:00 hours. However since this innovation has been implemented respondents indicated a later arrival time at home, as only 50.6 percent noted that they still arrived at home before 17:00 hours. This information is outlined in Table 101.

Table 101

Frequency and Percentage Distribution for the Times Employees Arrive Home from Work Pre and Post Compressed Workweek

Arrival Times	Pre Compressed Workweek		Post Compressed Workweek	
	f	%	f	%
< 16:30	-	-		
16:31-16:45	2	6.1	2	5.6
16:46-17:00	21	63.6	18	50.1
17:01-17:15	5	15.1	11	30.3
17:16-17:30	3	9.0	3	8.4
17:31-17:45	1	3.0	1	2.8
17:45-18:00	1	3.0	1	2.8
N	33	100	36	100

Summary. Thus, the implementation of the Compressed Hours model within this branch has been associated with a considerable number of changes concerning the patterns of working hours of respondents and if organizational communication and work scheduling is to be effective then these changes need to be incorporated into organizational planning.

THE IMPLEMENTATION OF A COMPRESSED WORKWEEK MODEL AND THE EFFECTS ON CONSUMPTION SPENDING

As discussed in Chapter 2, some of the previous studies focusing upon the impacts associated with the introduction of a Compressed Hours system have emphasized changes in the pattern of consumption spending among organizational participants. This section of the analysis will focus upon two aspects of changes related to consumption expenditure: (1) Changes in the level of consumption expenditure and (2) Changes in composition of consumption expenditure.

Changes in the Level and Composition of Consumption Spending

Level of Consumption Spending. An examination of the information contained in Table 102 showed that the majority of respondents 72.2 percent indicated that they spent the same amount on consumption expenditure pre and post the implementation of a compressed workweek. Alternatively, 11.1 percent of respondents indicated an increase in consumption spending and 16.7 percent of respondents recorded a decrease in consumption spending since this innovation has been implemented.

Table 102

Frequency and Percentage Distribution of Changes in the Level of Consumption Spending for The Compressed Hours Group

The Change in Consumption Expenditure	f	%
(1) Spending more than I did on a 5 day week	4	11.1
(2) Spending the same amount as I did on a 5 day week	26	72.3
(3) Spending less than I did on a 5 day week	6	16.7
N	36	100

Composition of Consumption Expenditure. Furthermore only 8.8 percent of respondents indicated that there had been any changes in the composition of their consumption expenditure. This information is outlined in Table 103, where respondents did indicate a change in the composition of their consumption expenditure since the adoption of this Compressed Hours model. Some of the items outlined by respondents are listed below:

- "Household items such as drapes, ornaments, linen, etc."
- "clothing"
- "groceries"
- "more time spending shopping for a variety of goods."

Table 103

Frequency and Percentage Distribution for Changes in the Composition of Consumption Expenditure for the Compressed Hours Group

Changes in Composition of Consumption Expenditure	f	%
Yes	3	8.8
No	31	91.2
N	34	100

Summary. Thus it was found that for the data obtained for this particular branch only a small percentage of respondents indicated an increase in the level of conumption spending, and furthermore only a small percentage of respondents indicated any change in the composition of their consumption expenditure.

COMPRESSED WORKWEEK AND THE PROVISION OF CHILD CARE FACILITIES

As outlined in Figure 23 the implementation of a

Compressed Workweek model in this branch required that employees work a 10 day workweek, within nine days. Thus for each day within this 9 day period the employees are required to spend additional time at the worksite. As outlined in Chapter 2, this longer working day has been associated with some problems in organizations for employees who have young families.

However, an examination of Table 104 showed that for this branch only 19.4 percent of the respondents had children, and within this group only 3.2 percent of the respondents employed a paid babysitter.

Table 104

Frequency and Percentage Distribution
Outlining the Nature of Childminding
Services for Compressed Hours Respondents

Nature of Child Care Services	f	%
(1) Spouse	5	16.1
(2) Paid Babysitter	1	3.2
3) Voluntary Babysitter (friends)	-	-
4) Creche	-	-
5) Other	-	-
6) No children	25	80.6
N	31	100

In addition, more of the Compressed Hours respondents indicated that this longer work day had created any additional childminding problems for them. This information is presented in Table 105.

Table 105

Frequency and Percentage Distribution for Responses Concerning the Problematic Nature of Child Care for Compressed Hours Respondents

Have longer hours created a childminding problem ?	f	%
Yes	-	-
No	25	100
N	25	100

Summary. Thus, the implementation of a Compressed Workweek model has not been associated with any serious problems for this group related to the provision of child care services.

FLEXIBLE WORKING HOURS AND CHANGES IN OPERATIONAL COSTS

With the assistance of the Personnel Branch data was obtained from each worksite involved with an innovation in the management of time, to examine the relationship between alterations in the workweek and some aspects of operational costs. For the purposes of analysis because of the diversity of results obtained from these various branches, changes obtained concerning operational costs have been reported as follows: (1) Maximum change, (2) Minimum change, and (3) Average change. The following data has been presented to reveal changes in comparative ratios using the pre-innovative year as the base year. Appendix H provides a listing of the raw data used to develop these indices.

Absenteeism Rates. An examination of Table 106 showed that the maximum change in absenteeism after the implementation of a flexible workweek was a 353.5 percent increase. Alternatively, the minimum change was found to be a 44.7 percent decline for one branch. The average change in absenteeism rates for all branches was a 78.6 percent increase after the introduction of flextime.

Further examination of Table 106 showed that for absences that were for a single day or less, one branch reported a 325 percent increase in these short absences. On the other hand, the smallest change in absences of one day or less was found to be a decline of 35.8 percent for one branch. However, on average, absences of a single day or less were found to have increased 81.4 percent for all branches.

Further investigation indicated that there was considerable change in the amount of times Flextime

Table 106

Comparison of Absenteeism Rates Pre and Post Flextime[a]

Time Period	Maximum Change (Days)		Minimum Change (Days)		Average Change[b] (Days)	
	Total Paid	Single Day or Less	Total Paid	Single Day or Less	Total Paid	Single Day or Less
Before Innovation (One Year)	100	100	100	100	100	100
After Innovation (One Year)	453.5	425	55.3	64.2	178.6	181.4
Changes in Days Absent	+353.5%	+325%	-44.7%	-35.8%	+78.6%	+81.4%

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained for ten flextime branches.

respondents were late for work pre and post the implementation of this innovation. The information outlined in Table 107 showed that prior to the introduction of flextime 30.0 percent of the respondents indicated that they were late for work between 1-5 times per month. However, since flextime was introduced respondents indicated this figure had declined to 11 percent. Also the number of respondents indicating that they were never late increased from 68 percent to 88.4 percent after the introduction of this innovation.

Table 107

Frequency and Percentage Distribution
for Late Arrivals at the Worksites
Pre and Post Flextime

Times Late	Pre Flextime f	Pre Flextime %	Post Flextime f	Post Flextime %
Never	136	68.0	129	88.4
1-5 times per month	60	30.0	16	11.0
5 times per month	4	2.0	1	0.7
N	200	100	146	100

Labor Turnover. The information presented in Table 108 outlines the comparative ratios for labor turnover in these branches pre and post flextime. One branch reported a substantial increase of 81.8 percent, in labor turnover, whereas the minimum turnover of staff was reported to be a

Table 108

Comparison of Labor Turnover Rates Pre and Post Flextime[a]

Time Period	Maximum Turnover	Minimum Turnover	Average[b] Turnover
Before Innovation (One Year)	100.00	100.00	100.00
After Innovation (One Year)	181.8	52.01	99.09
Changes in Turnover Rates	+81.8%	-47.99%	-.91%

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained from 11 flextime branches.

decline of 47.99 percent. However, the average labor turnover was fairly constant, as indicated by the small decline of 0.91 percent.

Average Staff Size. Table 109 showed that one branch reported a 150 increase in their average staff size since the implementation of flextime. Alternatively, another branch reported a 14.3 percent decline. However, on average all branches reported a 37 percent increase in average staff size.

Overtime. The information presented in Table 110 showed changes in the number of days of overtime worked in these various brances. The largest change in overtime since the introduction of flextime by any branch was an increase of 38.46 percent. On the other hand one branch reported a 100% decline in overtime since changing to a flexible hours system. However, an average all branches reported a 11.8 percent decline in overtime.

Summary. Thus, the implementation of flexible working hours has been associated with a change in a number of indicators of operational costs. On average, the largest change for all branches was found for the data relating to absenteeism rates, whereas the smallest changes were found among the data related to changes in labor turnover.

COMPRESSED WORKING HOURS AND CHANGES IN OPERATIONAL COSTS

Table 109

Comparison of Average Staff Sizes Pre and Post Flextime[a]

Time Period	Maximum Change Average Staff Size	Minimum Change Average Staff Size	Average Change[b] Average Staff Size
Before Innovation (Year 1, 2)	100	100	100
After Innovation (One Year)	250	85.7	137
Change in Average Staff Size	+150%	-14.3%	+37%

[a] Comparative proportions using pre innovative years (two year average) as a base year.

[b] Based on figures obtained for eleven flextime branches.

Table 110

Comparison of Overtime Rates Pre and Post Flextime[a]

Time Period	Maximum Change Days Overtime	Minimum Change Days Overtime	Average Change[b] Days Overtime
Before Innovation (One Year)	100	100	100
After Innovation	238.46	-	88.2
Change in Overtime Rates	+138.46%	-100%	-11.8%

a .Comparative proportions using pre-innovative year as a base year.

b Based on information obatined from six flextime branches.

In addition to the cost data gathered for the flextime branches, additional data was also obtained for this Compressed Workweek branch with the assistance of the Personnel Braaches with the Alberta Department of Education.

In the following analysis, a number of comparative ratios concerning costs are outlined, using the pre-innovative year as the base year. Appendix I provides a listing of the raw data used to derive these indices.

Absenteeism Rates. The information presented in Table 111 showed that for this Compressed Hours branch there has been a 3.7 percent increase in the total number of days absent by employees from this worksite. However, despite this slight increase in total absenteeism there had been a 25.5 percent decline in absenteeism involving one single day or less since the adoption of this innovation.

Further analysis revealed that there was very little change in the amount of times Compressed Hours respondents were late for work pre and post the implementation of this innovation. The information presented in Table 112 revealed that 68.6 percent of respondents indicated that they were never late for work prior to the introduction of this re-arranged workweek. Similarly 64.9 percent of respondents indicated they were never late for work since changing to this Compressed Hours structure.

Table 111

Comparison of Absenteeism Rates Pre and Post Compressed Workweek[a]

Time Period	Total Paid (Days)	Single Day or Less[b]
Before Innovation (June 74 - May 75)	100	100
After Innovation (June 75 - May 76)	103.7	74.5
Changes in Days Absent	+3.7%	-25.5%

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained for Finance, Statistics and Legislation Branch.

Table 112

Frequency and Percentage Distribution for Late Arrivals at the Worksite Pre and Post Compressed Workweek

Times Late	Pre Compressed Workweek		Post Compressed Workweek	
Never	24	68.6	24	64.9
1-5 times per month	11	31.4	31	35.1
5 times per month		-		
		-	-	-
N	35	100	37	100

Labor Turnover Table 113 showed that since the implementation of the compressed workweek model in this branch there had been a 24 percent increase in labor turnover.

Average Staff Size. Furthermore, Table 114 indicated that since the introduction of this innovation, the average staff size had increase 8.5 percent.

Overtime. Finally, an examintion of Table 115 revealed that there had been a 25 percent decline in the amount of days overtime worked since this re-arrangement of the workweek had been introduced.

Summary. Thus the introduction of this Compressed Hours model with this branch had been associated with a change in a number of indicators of operational costs. The

Table 113

Comparison of Labor Turnover Rates Pre and Post Compressed Workweek[a]

Time Period	Total Turnover[b]
Before Innovation (June 74 - May 75)	100
After Innovation (June 75 - May 76)	124
Change in Labor Turnover	+24%

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained for Finance, Statistics and Legislation Branch.

Table 114

Comparison of Average Staff Size Pre and Post Compressed Workweek[a]

Time Period	Average Staff Size
Before Innovation (1973-74)	100
Before Innovation (1974-75)	
After Innovation (1975-76)	108.5
Changes in Staff Size	+8.5%

a Comparative proportions using pre-innovative years (two year average) as a base year.

b Based on Figures obtained for Finance, Statistics and Legislation Branch.

Table 115

Comparison of Overtime Rates Pre and Post Compressed Workweek[a]

Time Period	Days Overtime
Before Innovation (June 74 - May 75)	100
After Innovation (June 75 - May 76)	75
Changes in Overtime	-25%

a Comparative proportions using pre-innovative year as a base year.

b Based on Figures obtained for Finance, Statistics and Legislation Branch.

largest reported change involved a 25 percent decline in the number of days overtime worked by this staff. Alternatively, the smallest change was a slight 3.7 percent increase in the total number of paid days for which respondents were absent from the worksite.

STANDARD HOURS GROUP PERCEPTIONS CONCERNING RESTRUCTURING OF THE WORKWEEK

The final section of this empirical analysis focused upon the perceptions of the Standard Hours respondents concerning the potential implementation of one of these innovations in the management of time.

Limitations of Innovations in the Management of Time as Perceived by Standard Hours Respondents

The information presented in Table 116 revealed that only 21.8 percent of the Standard Hours respondents expressed a negative interest concerning the adoption of one of these innovations in the management of time.

However, a diverse range of problems were outlined by this group to explain their negative attitude towards the implementation of some form of re-arranged workweek. Table 117 provides some sample comments provided by the Standard Hours respondents to illustrate their perceptions concerning limitation and problems associated with any restructuring of the workweek.

Table 116

Frequency and Percentage Distribution for Standard Hours Responses Relating to the Potential Adoption of a Re-Arranged Workweek

Potential Adoption	f	%
Yes	93	78.2
No	26	21.8
N	119	100

Table 117

Reasons for Maintaining Standard Hours Program as Commented Upon by Standard Hours Respondents

1. - Easier to follow a set schedule
2. - Work is of a better quality
3. - Less opportunity to cheat on time worked
4. - Employees used to working together, know each other better
5. - I like to leave work at the earliest hour possible after my 7.25 hour day
6. - Much of our work depend upon information and participation of others in the branch and department. Others on flex and compressed time can (and do) cause delays.
7. - This branch deals extensively with external clients. They should have service when they need it as they pay for it directly and indirectly
8. - This branch has a high degree of specialization of personnel. The work of individuals (e.g. meetings, consultation by appointment, conferences, inspections etc.) necessitate quite a high degree

of unavailability. Flex and Compressed time would add further time of unavailability.

9. - I have yet to see an evaluation of compressed time which convinces me that the output and service is not also compressed.

10. - Unless the working hours of the firms and school boards which we service change, we are almost committed to keep the standard workday.

11. - Most of the work of this branch is with school boards which work or maintin a standard hour program. School Boards expect business transactions during this period of time. Unless one has definite staff position, it would be difficult to meet requests of school boards.

12. - Is there any research evidence that compressed or flextime has not effected the output.

13. - One of the branches in this Department works on flextime. There have been several occasions were service could not be provided to this branch because the individual was not there.

14. - This branch experiences many meetings with clients. Compressing the workweek would decrease the service that is provided.

15. - New innovtions such as flextime or compressed workweek, would not apply in our situaton with two executives and one clerical.

16. - Our office is too small to remain open during regular hours of service expected by our publics if some people were to choose other arrangements for hours of work

17. - I have become used to the Standard Hours program in this office.

18. - I'm available when the various individuals and groups I work with expect me to be available.

19. - I prefer concluding an activitiy once I've attacked it, and have difficulty if my associates are not available when I wish to consult them.

20. - There may be reasons for certain employees of a

branch adopting flex or compressed work hours, but I would object to be the Senior staff members of a branch being absent during regular office hours.

21. - Professional staff need the clerical staff at all times.

22. - I would prefer to continue workhours somewhat similar to those of my husband.

23. - By the time 4:30 comes I am ready to go home -- I don't think I could hack a longer day than 7.25 hours per day at work.

In summary, the major limitations outlined by these respondents included the following areas: provision of service to the public, inter-organizational communication, intra-organizational communication, productivity , worker fatigue, interface with other organizations, size of organization, family problems and non-availability of Senior Managment personnel.

However, despite these criticisms of various forms of a re-arranged workweek Table 118 showed that 78.2 percent of standard hours respondents favoured the implementation of some form of innovation in the management of time.

Further investigation revealed that within the group of respondents that expressed a desire to adopt one of these innovations in the arrangement of time, preferences concerning the adoption of a Flextime model or a Compressed Hours model were aproximately equal with 48.9 percent of respondents expressing a preference for a Compressed Hours model and 51.1 percent of respondents expressing a preference for a Flextime model. This information is outlined in Table 118.

Table 118

Frequency and Percentage Distribution for Standard Hours Respondents Preferences Concerning the Adoption of a Re-Arranged Workweek

Preference	f	%
(1) Compressed Workweek	45	48.9
(2) Flextime	47	51.1
N	92	100

Perceived Advantages of a Flextime Model for Standard Hours Respondents

Some of the Standard Hours Respondents provided additional commentary concerning their perceptions relating to the potential implementation of a flextime model within their respective branches of the Alberta Department of Education. These respondents presented a wide variety of perceived advantages relating to the adoption of a flextime model. For example, one respondents commented:

> It is my opinion that flextime would give an incentive to get at a project, possibly work some extra time such as 15-10-30 minutes early in the morning and part of lunch hour, if a person wished to do so, with the reward of having some time in the bank, which could

> be used as time off to get away early if you were going some place for a weekend or for recreational time.

Another respondent referring to the potential advantages of flextime time stated:

> It enables the organization to more readily respond to personal and professional needs of staff to variation in office workload, family/household affairs.

Finally, one respondent commented:

> I am alrady working a flextime schedule in practice -- evening and weekend meetigs are frequent, as is travelling time after regular work hours. As a result late morning starts and extended lunch hours are frequent. However, this is not recognized officially and a flextime program would legitimize what already occurs in practice -- and give recognition for the many excess hours compiled one to travel, weekend and evening meetings.

These sample comments serve to illustrate some of the potential advantages of a flextime model as perceived by the Standard Hours respondants. A listing of some of these comments is presented in Table 119 and the following potential advantages of a flextime model were outlined: Reduction in lost working hours, increased productivity, reduction in overtime, savings in commuting time and reduction in traffic conjestion, more effective use of leisure time, and better management of household and family affairs.

Table 119

Advantages of a Flextime Model as Commented Upon by Standard Hours Respondents

1. More time for hobbies and relaxation.

2. More time at home to do interesting projects or pursue hobbies further. Time to decide schedules around summertime light hours or take part in winter time activities while there is still light.

3. Good for occassional day off, which would be nice.

4. Travel to and from work could be made simpler. More free time for personal business.

5. It is my opinion that flextime would give an incentive to get at a project, possibly work some extra time such as 15-10-30 minutes early in the morning and part of lunch hour, if a person wished to do so, with the reward of having some time in the bank which could be used as time off to get away early if you were going some place for a week end or for recreational time.

6. Flextime would enable fieldmen to balance the workweek (in office) with overtime or long hours while on the road.

7. Enables the organization to more readily respond to personal and professional needs of staff to variatons in office workload, family/household affairs.

8. Can arrange your own time for better completion of work assignments. Employer made to give work assignments with enough time to be done properly, not given at the last minute because the secretary is available at all times.

9. Greater freedom to organize my professional activities both on and off the job.

10. Flextime would permit early starting and leaving time and thus avoid rush hour traffic.

11. More compatible to spouse's hours of work.

12. Time available to attend to personal business during regular working hours of other offices.

13. A am already working a flextime schedule in practice -- evening and weekend meetings are frequent, as it

travelling time after regular work hours. As a result, late morning starts and extended lunch hours are frequent. However, this is not recognized officially and a flextime program would legitimize what already occurs in practices -- and gives recognition for the many excess hours compiled due to travel, weekend and evening meetings.

14. It would be nice to start earlier in the summer and have more time off at the end of a week -- enjoy the weather. (But, of course, put in the required number of hours.)

15. Flextime would allow for time worked in overtime to be credited to holiday permits. A larger number of overtime hours are necessary but there is not any recognition of this in pay or time off benefits.

16. The opportunity for a day off occassionally would give my family time to spend more activities together.

17. My main reason is that so much time is spent by me in commuting between St. Albert and Edmonton. Having to travel during peak periods is a frustrating and time consuming business. With flextime, I could avoid the great congestion of traffic.

18. Flextime is better suited to the type of work we are doing. When there are deadlines to meet we either work late at the office or take the work home with us. The stenographic help goes home at 16:30 hours and is not normally available to work additional time at either end of the day.

19. I feel that some form of compensation is required for evening and Saturday that are worked. Probably "time off" would be the most acceptable.

20. The job frequently requires an extended workday, evening and week- ends. Flextime would permit time-off for extra time spend on the job. Staff would be more willing to put in the extra time when required.

21. I would like to see flextime in our department. Personally for me I would come to work earlier and get off earlier, leaving me mor time to prepare supper, shop etc. Most important, would have a little mor time to spend with my baby after picking her up from daycare.

22. My reasons are the following:
(1) If we had flextime I could start earlier and come

home earlier than usual. My bus connections would be better if I got off earlier and then it wouldn't take me an hour or mor to get home after work.
(2) I could have more time for my family and my hobbies and I could play softball again if I got home earlier.

23. As a housewife I would like more time in the evenings to do things such as laundry, cleaning, cooking, etc. -- reduce noon hour to half an hour and leave at 4:00 p.m. If I have to be late or am accidentally late I could make up for it at another time rather than getting deducted or feeling guilty. If I were able to build up hours and be able to take off one day every two weeks or so my sick time would probably decrease - I get run ragged and end up needing a sick day every now and then just to catch up on rest so that I can keep going. I think flextime would increase support staff morale. It just given them a bit more freedom and independence to plan their own schedule, but to know they have to act responsibly or their freedom will be taken away from them.

24. If conducted correctly and with full cooperation from all personnel the strict office routine can be eliminated. Routine is always boring, being on flextime eliminates this. It also enables you a day off a month to catch up on your home routine etc. I think your personal freedom as to the times you start and finish, within reason of course, is important for a better working environment.

Perceived Advantages of a Compressed Hours Model for Standard Hours Respondents

As discussed in Table 118, 48.9 percent of Standard Hours respondents who expressed a preference for an altered workweek, expressed a preference for a Compressed Hours model. As was the case with flextime, these respondents perceived a diverse range of potential advantages associated with the implementation of a Compressed Hours model.

For example, one respondent stated that a Compressed Hours model would provide:

> More time to carry on personal business (shopping, paying bills, etc.). For example, I recently had to have a serviceman call at my home. As his hours of work were similar to mine, it was necessary for me to ask a married daughter to spend a day at my house (at great inconvenience to her) and then the service man did not come.

In addition, another respondent commented:

> I feel tht we put in a lot of overtime and although some compensation is made for this there should be some method of legitimizing the procedure and the compressed workweek may be one way of achieving this.

Finally, one respondent stated:

> I would enjoy the compressed workweek entirely for the three day weekend it would give me.

A summary of the comments is presented in Table 120 and the following potential advantages of a Compressed Hours model were outlined: longer contact hours with the public, higher productivity, improved planning of work routine, increased motivation, improved handling of domestic problems, improved personnel development, better organized leisure time, reduced overtime, and improved family contact.

Table 120

Advantages of a Compressed Hour Model as Commented
Upon by Standard Hours Respondents

1. Longer hours would increase counter service for the

public to obtain their needs.

2. There would be a definite knowledge of who would be at work and when.

3. Much more work would be finished each day.

4. Compressed work week will allow me more time to pursue my studies.

5. The extra day off would be something to look forward to and give me more time for my volunteer work or other important things.

7. Many car and domestic maintance needs are difficult to arrange during the normal workweek. These tend to accummulate and workin time is taken.

8. A compressed workweek would allow for organized personnal developmeet and recreational activities.

9. I would enjoy the compressed work week entirely for the 3 day weekend it would give me.

10. I feel that we put in a lot of overtime and although some compensation is made fo this there should be some method of legitimizig the procedure and the compressed work week may be one way of acheiving this.

11. More time to carry on personal business(shopping, paying bills, etc.). For example, I recently had to have a service man call at my home. As his hours of work were similar to mine, it was necessary for me to ask a married daughter to spend a day at my house (at great inconvenience to her), and then the service man did not come.

12. More time to do household hcores and outdoor work during the daylight hours. *Please note: I am not in favor of adopting a compressed work week in the winter time -- only in the summer months

13. Purely for personal reasons, more time at home with family, to travel a little more, to have a day to do personal family business when business offices are open.

14. Will have moe time to spend with family doing things I like to do, e.g. reading, education, gardening, music (practising), plus mor time to relax. Hate to be on the "GO" constantly.

15. There are many offices etc. which are only open on the same days I am requird to work. Compressed work week would give me an opportunity to attend to personal matters without having to take time off. For instance I would like to buy a few pieces of furniture being tendered by Alberta Government Warehour but am unable to see them.

16. With the Compressed Workweek, it would allow a little extra time to do your personal business on the extra day, rather than take time during the work week. (Doctor appointments, Dental Appointments, and Eye doctor). Also it would allow for a long weekend mor ooten enabling people to go out of town for a few days or to visit their families more often. It also may eliminate from time off or absenteeism.

17. The compressed work week would allow two extra long-weekends per month. Even if the long-weekend is not used to good advantage, the single days in which to work around the house, or shop, or just to laze around the house and re-cuperate from a heavy work week could be very beneficial.

18. I would have a three day weekend every 2 weeks to either travel or do my personal business at leisure. That would cut down running around at noon or after supper to give a little more relaxation.

CHAPTER SUMMARY

First, this chapter focused upon the impact of alterations in the workweek upon changes in the pattern of working hours and operational costs for the flextime and Compressed Hours sub-populations, and a number of changes were identified.

Secondly, some aspects of organizational change within the Compressed hours branch were examined, including changes in the level and composition of consumption expenditure and child minding problems. However, few changes were found in these areas.

Finally, some of the costs and benefits associated with the potential introduction of a re-structured workweek as perceived by the Standard Hours respondents were outlined in detail, and it was found that the majority of these respondents favoured some form of alteration in the structuring of the workweek.

CHAPTER 8

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

SUMMARY

The Problem

The primary purpose of this study was to examine the effects of organizational change arising from alterations in the structuring of the workweek. The basic problem was to determine if there are any significant differences in the operation of the organization among groups involved in different workweek structures.

The study was designed to focus upon differences pertaining to both intra and inter-group perceptions of organizational operations and the effects of various allocations of working hours.

Inter Group Analysis

This study examined the following aspects of the various groups of respondents perceptions concerning the allocation of hours of work: (1) The identificaton of job satisfaction items upon which the groups generally agree, (2) Significant differences in the perceived level of job satisfaction, (3) Important differences in the discrepancy ranking of job satisfaction items, (4) Significant differences in the perceived level of organizational performance (5) Important differences in the 'discrepancy ranking' of organizational performance items, (6) Significant differences in the nature of family interaction and family relationships, (7) The nature and degree of participation in various leisure activities, (8) The nature of commuting patterns and travel arrangements.

Intra-Group Analysis

In addition to examining differences among these groups, this study also focused upon differences in perceptions of respondents working within a particular workweek structure.

Firstly, this section of the study examined differences between management and non-management perceptions, and addressed itself to the following questions concerning the allocation of working hours: (1) Significant differences in the perceived level of job satisfaction, (2) Identification of job satisfaction variables upon which management and non-management personnel agree, (3) Significant differences in the perceived level of organizational performance, (4) Identification of organizational performance items upon which management and non-management personnel agree, (5) Significant differences in perceptions of family interaction and personal relationships, (6) The relationship between the personal characteristics of the groups and their perceptions of job satisfaction and, (7) The relationship between the personal characteristics of these groups and their perception of organizational performance.

In addition, this section of the study also examined (8) Changes in operating costs associated with a particular innovation in the management of time, (9) Changes in the pattern of working hours associated with a particular restructuring of the workweek, (10) Changes in the level and composition of consumption spending for Compressed Hours respondents, (11) Changes in the provision of child care facilities for Compressed Workweek respondents and (12) the perceptions of Standard Hours respondents concerning the potential implementation of some form of re-arranged workweek.

The Procedure

Data were collected from a stratified random sample of respondents from across these three identified populations: (1) Flexible Hours, (2) Compressed Hours and (3) Standard Hours.

A questionnaire and an interview schedule was developed by the researcher to obtain this data and a pilot test was conducted to improve the validity and the reliability of this item pool.

Descriptive and inferential statistics were used to analyze the data. Parametric tests were used widely to determine probability levels of statistical significance. Statistical significance was reported when the obtained probability was not greater than .05. Therefore significant differences were reported when there was a 95 percent probability that the differences obtained in the sample could be attributed to differences in the population, rather than chance error in random sampling.

1. The Findings - Intra-Group Analysis

In the first section of the data analysis intra-group differences in perceptions of organizational operations associated with various workweek structures were examined.

A. Job Satisfaction Analysis

Comparative Analysis of Job Satisfaction Priorities. The findings disclosed that there was considerable dissensus among all three groups concerning their perception of both high and low priorities for their job satisfaction variables.

Only one variable, name (6) The arrangements personnel have to travel to and from work' was included among the three most satisfactory aspects of the job environment by all three groups. However, (3) The method of keeping track of hours worked each day was included by the Standard and Compressed Hours group.

On the other hand, only one variable, (7) The utilization of the service provided by the bus system was included by all three groups as unsatisfactory. Furthermore, the Standard and Compressed Hours groups were dissatisfied with, (4) The freedom they have to arrive and depart from work and (10) The freedom they have to handle personal business during the workday.'

Differences between means for job satisfaction. An analysis of variance procedures was employed to examine significant differences between pairs of group means among: (1) Total personnel mean scores, (2) Management mean scores and (3) Non-management mean scores.

When comparing the mean scores among the total personnel it was found that significant differences were obtained among the groups for all of their job satisfaction variables. In every case the two innovative groups were significantly more satisfied with their job environment than the Standard Hours respondents.

However, a comparison of the management mean scores, with the exception of one case, did not perceive any signficant differences relating to the aspects of job satisfaction measured in this study. The one exception was (10) Freedom to handle personal business during the workday where the Flextime management were significantly more satisfied with their arrangements than Standard Hours managers.

Alternatively, the non-management groups perceived significant differences for all variables relating to job satisfaction measured in this study. In all cases the two innovative groups indicated higher job satisfaction than the Standard Hours group.

Comparison of Discrepancies Ranking for Job Satisfaction Items. It was found that there was fairly low agreement among the three groups concerning the job satisfaction variables that incorporate the highest discrepancy. This discrepancy concept refers to the absolute difference between management and non-management mean scores. No one variable was included among the three highest discrepancies for all three groups of respondents. However, two items were included among the three highest discrepancies for the Compressed and Standard Hours group. These were: (4) Freedom to handle personal business during the workday, and (5) The way your immediate supervisor is handling the program. In both cases the non-managmenet group was more satisfied with these changes.

On the other hand, there was alsc considerable dissensus among the three groups concerning the variables that contained the lowest discrepancies. All these groups included three different variables amonst their three lowest discrepancy rankings.

B. Organizational Performance Analysis

Differences between Means for Organizational Performance. The Scheffe Multiple Comparison of Means test was employed to examine statistically significant differences among the group mean scores for two aspects of changes in organizational performance: (1) The direction of change, and (2) The importance of the change.

This analysis of variance procedure was employed to examine significant differences between pairs of group means among: (1) Total personnel mean scores, (2) Management mean scores and (3) Non-management mean scores.

Total Personnel. Statistically significant differences were found among means for 8 of the 15 items related to the direction of changes that have occurred as determined by the perceptions of the total personnel in all groups.

In addition statistically significant differences were found among 5 of the items concerning the importance of changes in organizational performance.

Management. The findings disclosed that statistically significant differences were found among the means for 7 of the 15 items related to the direction of change in organizational performance.

Furthermore, significant difference were found among 6 of the items concerning mean scores related to the importance of changes in organizational performance.

Non-Management. Finally, it was disclosed that statistically significant differences related to perceptions for the direction of changes in organizational performance were found among 9 of the 15 items.

In addition, for mean scores relating to the importance of changes in items relating to organizational performance significant differences were found among 6 of the 15 items.

Comparison of Discrepancy Ranking for Organizational Performance Items

Direction of Change. It was revealed that there was fairly low consensus among the three groups concerning the organizational performance items that incorporate the highest discrepancies between management and non-management perceptions. Only one item, namely (1) Availability of people with whom you must work' was included by at least two groups, namely the Standard and Compressed Hours groups.

A similar finding was obtained for the lowest discrepancies outlined by these three groups. Only one variable, namely (8) Availability of office equipment" was included among the three lowest discrepancy items for all three groups.

Importance of Change. However, there was slightly higher consensus among these three concerning the organizational performance variables that contained the three highest discrepancies relating to perceptions of the importance of any changes in organizational performance.

One item (14) Your overall work performance, was included by all three groups, and (13) The service your branch provides to the public was included by the Standard and Compressed Hours Group.

Alternatively, concerning the three lowest discrepancies, no one item was included by all three groups. However, (5) Ability to arrange meetings with others when necessary and (3) Degree of difficulty in scheduling work requiring others, were included by both the Standard and Compressed Hours groups among their three lowest discrepancies.

C. Personal Interaction and Family Relationship Analysis

Differences Between Means for Family Interaction and

Family Relationships. A Scheffe multiple comparison of means test was used to determine significant differences between pairs of group means among: (1) Total personnel mean scores, (2) Management mean scores and (3) Non-management mean scores.

Two aspects of change in these relationships were examined using this analysis of variance procedure: (a) Direction of change, and (b) Importance of change in these variables.

Total Personnel. Statistically significant differences were found among two of the four items concerning the direction of changes related to this factor. Furthermore, significant differences were also found, among mean scores for the same two items concerning the importance of changes associated with this factor. These items are (1) Management of family affairs (4) Time available to organize personal business affairs".

Management. The findings disclosed that no significant differnces were found among any of the means related to items associated with the direction of change in this factor. However, significant differnces were obtained among mean scores for 2 items concerning the importance of changes in this factor. These were: (1) Management of family affairs and (3) Amount of time spent with friends.

Non-Management Finally, it was found that significant differences were obtained for mean scores related to two items concerned with the direction of changes in this factor. Similarly, significant differences were also found among means associated with the same two items, concerning the importance of changes in this factor. These were: (1) Management of family affairs, and (4) Time Available to organize personal business affairs.

D. Participation in Leisure Activities

It was found that for 10 of the 14 items where important differences were found relating to decreased participation in leisure activities, the two groups involved in altered workweeks indicated a greater decline than the Standard Hours group.

Furthermore, for one item, namely, 'the level of boredom associated with leisure' the innovative groups indicated that they had experienced a greater increase in boredom than the Standard Hours group.

E. Commuting Patterns and Travel Arrangements

The findings disclosed that both of the groups associated with innovations in the management of time made greater utilization of the public transit system than the Standard Hours group. Furthermore, the two innovative groups made greater use of car pools and thus contributed to the alleviation of traffic congestion. In addition, it was found that the innovative groups tended to have more members from their car pools from outside of their immediate family than the Standard Hours group.

Finally, their was little differences found regarding the parking costs among all groups of car commuters, but the Flextime group tended to make greater use of government parking facilities.

2. The Findings -- Inter-Group Analysis

In the second section of the data analysis inter-group differences in perceptions of organizatonal operations associated with various workweek structures were examined.

A. Job Satisfaction Analysis

Differences Between Management and Non-Managment Means for Job Satisfaction. A series of t-tests were conducted to determine significant differences between management and non-management means within each type of workweek structure.

Standard Hours Group. It was found that significant differences were obtained for six of the ten variables, at the .05 level of probability. In each case the management mean was lower than the non-management mean indicating that the former group was more satisfied with changes that have occurred in the level of job satisfaction in their respective branches over the last 12 months.

Compressed Hours Group. Within this branch only means related to two variables were found to be significantly different at the .05 level of probability. In both cases the management mean was lower than the non-management mean, indicating that the former group suggested a higher level of job satisfaction regarding these variables.

Flexible Hours Group. It was found that significant differences were obtained for only two pairs of means at the .05 level of probability. In both cases the non-management mean was lower than the management mean indicating that the former group suggested a higher level of job satisfaction for these items.

Comparative Analysis of Discrepancy Ranks. The term discrepancy refers to the absolute difference between a management and non-management mean score for a particular job satisfaction item.

Standard Hours Group. The findings revealed that in every case the management mean was lower than the non-management mean, indicating that the latter group tended to be less satisfied with their job environment than the management group. Furthermore, it was found that in order of priority the following three job satisfaction items contained the highest discrepancies concerning perceptions of change between management and non-management groups: (4) The freedom you have to decide when you will arrive and depart from work; (5) The way your immediate supervisor is administering the program; and (7) Freedom to handle personal business during the workday.

On the other hand, in order of priority, the Standard Hours management and non-management group means that contained the three smallest discrepancies were: (10) The way you now complete and organize your work; (8) Your utilization of the service provided by the bus system; and (9) Changes which have occurred in the way work is done.

Compressed Hours Group. It was found that in every case the management mean was higher than the non-management mean indicating greater job satisfaction among the latter group. In addition, the findings disclosed that in order of priority, the highest discrepancies were obtained among the following three items: (7) Freedom to handle personal business during the workday; (5) The way your immediate supervisor is administering the program; and (2) The way in which the program is organized.

Alternatively, the three items containing the smallest discrepancies were: (3) Method of keeping track of hours each day; (6) The arrangements you have to travel to and from work and (1) The overall program in your department.

Flexible Hours Group. The findings revealed that for 9 of the 10 items for which job satisfaction scores were obtained the management mean was higher than the non-mangement mean, indicating that the latter group tended to be more satisfied with changes relating to their job environment since the introduction of flextime. It was found that in order of priority, the largest discrepancies were obtained for the following three items, indicating the greatest disensus among management and non-management groups: (3) The method of keeping track of hours worked each day; (2) Your utilization of service provided by the bus system; and (9) Changes which have occurred in the way work is done.

In contrast to the above findings, the three items containing the smallest discrepancies were: (4) The freedom you have to decide when you will arrive and depart from work; (7) Freedom to handle personal business during the workday; and (2) The way in which the program is organized.

B. Organizational Performance Analysis

Differences Between Management and Non-Management Means for Organizational Performance. A series of t-tests were conducted to determine significant differences between management and non-management means within each type of workweek structure, focusing upon: (a) Direction of Change and (b) Importance of Changes in Organizational Performance.

Standard Hours Group. Firstly, concerning the direction of changes in organizational performance it was disclosed that significant differences were obtained for only two of the 15 items at the .05 level of probability. These variables included: (5) Availability of people with whom you must work and (4) The service your department provides to the public. In both cases the non-management mean was higher than the management mean, indicating the latter group perceived greater improvement in these items.

However, no significant differences were found among these 15 items concerning management and non-management perceptions relating to the importance of any changes in organizational performance.

Compressed Hours Group. An examination of pairs of means related to the direction of change in organizational performance revealed that significant differences were found between three pairs of mean scores, at the .05 level of probability. These were: (1) Availability of people with whom you must work; (2) Availability of others for 'spur of the moment' discussions on phone calls and (3) Desirability of respondents branch as a place to work. In all cases the management mean was higher than the non-management indicating the latter group noted greater improvement in these items.

In contrast to the above findings, no significant differences were found among any of these 15 items related to the importance of any changes in organizational performance.

Flexible Hours Group. For mean scores related to the direction of change in organizational performance, only two of the 15 items contained significant differences at the .05 level of probability. These were: (1) Travel to and from work; and (15) The availability of services such as dining rooms, elevators and cafeterias. In both cases the management group mean exceeded the non-management mean score, indicating the latter group perceived greater improvement in these items.

On the other hand, for means related to the importance of changes in organizational performance, only one item was found to be significantly different at the .05 level of probability. This was (4) Your overall work performance, where the management group perceived any change in this item to be of less importance than the non-management group.

Comparative Analysis of Discrepancy Ranks

The term discrepancy refers to the absolute difference between the management and non-management mean scores for these organizational performance items.

Standard Hours Group-Direction of Change. Firstly, for mean scores related to the direction of changes in organizational performance, it was found that for 9 of the 15 items the non-management mean was higher than the management mean, indicating that the former group perceived the direction of change to be less acceptable. Furthermore, it was found that in order of priority, the three highest discrepancies were as follows: (13) The service your department provides to the public; (1) Availability of people with whom you must work and (2) Degree of participation in decisions about work assignments.

Alternatively, in order of priority, the greatest consensus was indicated among the following three items as they contained the lowest discrepancies: (14) Your overall work performance; (6) Availability of others for spur of the moment discussions or phone calls; and (15) The availability of services such as dining rooms, elevators and cafeterias, (8) Availability of office equipment, and (4) Quality of communication about work assignments. These latter three items shared tied ranks.

Standard Hours Group-Importance of Change. It was found that the management mean was higher than the non-management mean for 9 of the 15 items, indicating that the former group tended to perceive changes in these items to be of less importance. In order of priority the three highest discrepancies were obtained for the following variables: (9) Desirability of the respondents department as a place to work; (2) Your overall work performance; and (13) The service your branch provides to the public.

On the other hand, the greatest consensus was obtained for the following three items because they contained the lowest discrepancies: (20) Degree of fatigue associated with your daily work assignments; (5) Ability to arrange meetings with others when necessary; and (6) Availability of others for 'spur of the moment' discussions and phone calls, and (4) Quality of communicaton about work assignments. These last two items shared tied ranks.

Compressed Hours Group-Direction of Change. It was found that for 8 of the 15 items the management mean was higher thant the non-management mean, indicating that the latter group perceived the direction of change in these items to be more acceptable. Furthermore, it was found that the greatest dissensus occurred among the following three variables, that in order of priority contained the highest discrepancies: (9) Desirability of respondents department as a place to work; (6) Availability of others for 'spur of the moment' decisions; and (1) Availability of people with whom you must work.

In contrast to the above findings the three smallest discrepancies were obtained among the following items, indicating the highet level of consensus among these two groups: (11) Travel to and from work; (7) Organization of your work and (8) Availability of office equipment.

Compressed Hours Group-Importance of Change. It was found that for 8 of the 15 items the non-management mean was higher than the management mean indicating that the former group tended to perceive changes in these items to be of lesser importance. Further analysis revealed that the three items that contained the greatest discrepancies, indicating the most disagreement among these two groups included: (14) Your overall work performance; (12) The service your branch provides to other branches; and (13) The service your branch provides to the public.

On the other hand, the three items containing the smallest discrepancies were: (2) Desirability of respondents branch as a place to work; (7) Organization of your work and (3) Degree of difficulty in scheduling work requiring others, (4) Quality of communicaton about work assignments, and (5) Ability to arrange meetings with others when necessary. These last three variables shared tied ranks.

Flexible Hours Group-Direction of Change. It was found that for 11 of the 15 items the management mean was higher than the non-management mean, indicating that the latter group perceived the direction of change in these areas to be more acceptable.

In addition, it was found that the largest discrepancies were obtained for the following three items: (10) Degree of fatigue associated with your work assignments; (11) Travel to and from work; and (7) Organization of your work, and (14) Your overall work performance. The last two items shared tied ranks. Alternatively, the following three variables contained the smallest discrepancies: (12) The service your branch provides to other branches; (8) Availability of office equipment; and (5) Ability to arrange meetings with others when necessary.

Flexible Hours Group-Importance of Change.. The findings disclosed that for 12 of the 15 items the management mean was higher than the non- management mean, indicating that the latter group attributed greater importance to changes in these items. Furthermore, it was disclosed that the highest dissensus was obtained for the following three variables as they contained the highest discrepancies: (14) Your overall work performance; (1) Availability of people with whom you must work; and (3) Degree of difficulty in scheduling work requiring others.

On the other hand, in order of priority the smallest discrepancies were contained among the following three items: (10) Degree of fatigue associaed with your daily work assignments; (6) Availability of others for 'spur of the moment' discussions and phone calls; and (4) Quality of communication about work assignments.

C. Family Interaction and Personal Relationships Analysis

Differences Between Management and Non-Management Mean Scores. A series of t-tests were conducted to determine significant differences between management and non-manangement means related to two aspects of changes in family interaction and personal relationships. These were (1) Direction of change, and (2) Importance of change.

Standard Hours Group-Direction of Change, was found that significant differences were obtained between two pairs of mean scores at the .05 level of probability. These were: (2) Amount of time spent with family, and (3) Amount of time spent with friends. In both cases the management mean was higher than the non-management mean indicating that the former group perceived greater deterioraton in changes relating to these items.

Standard Hours Group-Importance of Change.. Further examination disclosed that no significant differences were found among pairs of mean scores for these items at the .05 level of probability.

Compressed Hours Group-Direction of Change. The findings showed that at the .05 level of probability, no significant differences were obtained between the pairs of means for these items.

Compressed Hours Group-Importance of Change. The findings revealed that only one pair of mean scores was significantly different at the .05 probability level. The management mean, was significantly higher than the non-management mean for variable (3) Amount of time spent with friends. This management group indicated that any change in the amount of time they spent with their friends was less important to them, than it was for non-management personnel.

Flexible Hours Group-Direction of Change. The findings showed that at the .05 probability level significant differences were found between pairs of means for all four items. These were: (1) Management of your family affairs, (2) Amount of time spent with family, (3) Amount of time spend with friends, and (4) Time available to organize your personal business affairs. In all cases the management mean exceeded the non-management mean indicating that the latter group perceived greater improvement in family interaction and personal relationships since the introduction of flextime.

Flexible Hours Group-Importance of Change.

Additional examination showed that only one pair of mean scores were significantly different at the .05 probability level. The management mean was significantly higher than the non-management mean at the .01 probability level for variable (4) Time available to organize your personal business affairs. Thus the non-management group perceived changes in this item to be more important than the management group.

D. Correlation Analysis-Job Satisfaction

Pearson correlation co-efficients were obtained to examine significant relationships between the personal characteristics of respondents and their perceptions of job satisfaction.

Standard Hours Group. The data disclosed that some significant relationships were found to exist between the Standard Hours group perceptions of job satisfaction and all personal variables except 'The number of dependents who require assistance before and after work.' However in only four cases did the obtained correlation coefficient exceed .40. These instances were: The relationship between the occupational classification of respondents and (4) The freedom they have to decide when they will arrive and depart from work (r=0.575), and (5) The way your immediate supervisor is administering the program (r=0.408).

In addition the income level of respondents was found to be significantly correlated with (4) The freedom they have to decide when they will arrive and depart from work (r=-0.402).

Finally the level of education of respondents was also found to be significantly related to (4) The freedom they have to decide when they will arrive and depart from work (r=-0.499).

Compressed Hours Group. It was found that very few significant relationships were found between the Compressed Hours personal variables and their perceptions of job satisfaction. No significant correlations were obtained for the following variables at the .05 level of significance: Sex, Occupational Classification, Marital Status, Family Size, and the Employment Status of the respondents spouse.

Furthermore, for this group in only three instances did the obtained correlation co-efficient exceed .40. First, the age of respondents was found to be significantly correlated with (8) Changes which have occurred in the way work is done (r=-0.498) and (9) The way you now organize and complete your work (r=-0.526).

Flexible Hours Group. Similarly, for this group few significant relationships were found to exist between the flextime respondents personal variables and their perception of job satisfaction. No significant correlations were obtained for the following variables, at the .05 level of significance: income, marital status, family size, educational record, and employment status of respondents spouse. In addition, none of the obtained correlation co-efficient exceeded .40.

E. Correlation Analysis - Organizational Performance

Pearson r correlation co-efficient were determined to examine significant relationships between the personal characteristics of respondents and their perception of organizational performance focusing upon: (a) direction of change and (b) importance of change.

(a) Direction of Change

Standard Hour Group. For this group none of the obtained correlation co-efficients exceeded .40, although many significant correlations were obtained.

Compressed Hours Group. For correlations concerning personal variables and the direction of change eight correlations were obtained that exceeded a .40 level. First the age of respondnets was significantly related to (1) Desirability of respondents branch as a place to work. Secondly, the sex of respondents was significantly correlated with (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.527).

Thirdly, the income level of respondents was also significantly correlated with (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.421).

Fourthly, whether or not respondents have dependents requiring assistance before and after work was found to be significantly correlated with (3) Availability of office equipment (r=0.488) and (5) Availability of people with whom you must work (r=0.459).

Fifthly, the level of education of Compressed Hours respondents was significantly related to (10) Availability of others for 'spur of the moment' discussion or phone calls (r=0.401).

Finally, the employment status of the spouse of respondents was found to be significantly related to (5) Availability of people, (10) Availability of others for 'spur of the moment' discussions or phone calls (r=0.527) and (14) The service your branch provides to the public (r=-0.459).

Flexible Hours Group. None of the obtained correlation co-efficients concerning the relationship between personal variables and the direction of change in organizational performance exceeded the .40 level.

(b) Importance of Change

Standard Hours Group. No significant correlation exceeding the .40 level were obtained between the personal variables relating to this group and their perceptions concerning the importance of any changes in organizational performance.

Compressed Hours Group. Only two of the obtained correlation co-efficients for this group exceeded the .40 level.

It was found that the marital status of respondnets was significantly related to (18) The amount of time spent with friends (r=0.417). Furthermore for respondents who had dependents requiring personal assistance before and after work a significant relationship was found with (12) Degree of fatigue associated with your daily work assignments (r=0.441).

Flexible Hours Group. None of the obtained correlation co-efficients for this group exceeded the .40 level.

F. Changes in Operating Costs

Flexible Hours Group. The implementation of flexible working hours had been associated with a change in a number of indicators of operational costs. On average, the largest change for all branches was found for the data relating to absenteeism rates, where a 78.6 percent average increase was reported for all branches. In contrast to this finding the smallest change reported in this data related to changes in labor turnover, where a 0.91 percent average decline was recorded.

Compressed Hours Group. Similarly, the implementation of this Compressed Hours model had also been associated with changes in a number of indicators of operational costs. The largest reported change involved a 25 percent decline in the number of days overtime worked by this staff. On the other hand, the smallest change was a slight 3.7 percent increase in the total number of paid days for which respondents were absent from the worksite.

G. Changes in the Pattern of Working Hours

Flexible Hours Group. The implementation of this Flextime model had been associated with a considerable number of changes in the pattern of working hours of organizational members. Important changes were found to occur among the following aspects of the arrangement of working hours: Departure from home, Arrival at work, Commencement of lunch break, Termination of lunchbreak, Departure from work, and Arrival at home.

Compressed Hours Branch. Similarly, the pattern of working hours of Compressed Hours respondents also involved a number of important changes. The pattern of working hours was determined either directly or in consultation with the supervisor and the following aspects of working hours underwent important changes: Departure from home, Arrival at work, and Commencement and Termination of lunchbreak. However smaller changes were found concerning the time employees departed from work and arrived at home.

H. Compressed Hours and Changes in Consumption Expenditure

The findings disclosed that for this particular branch only a small percentage of respondents indicated an increase in their level of consumption spending, and furthermore only a small percentage of respondents indicated any change in the composition of their consumption expenditure.

I. Compressed Workweek and Provision of Child Care Facilities

It was found that the implementation of a Compressed Workweek, had not created any serious child-minding responsibilities for these respondents and only 3.2 percent of the respondents employed a paid babysitter.

J. Standard Hours Perceptions of Innovations in the Management of Time

It was found that only one-fifth of the respondents expressed a negative interest in the adoption of one of these innovations in the management of time. The remaining group of respondents were almost equally divided in their preference for Flextime or a Compressed Hours model. Most of the benefits discussed in Chapter 2 were outlined among their reasons for stating a preference for a particular model.

CONCLUSIONS AND IMPLICATIONS

A. Inter-Group Analyses

1. Perhaps the most important finding of this study was that for all of the variables related to job satisfaction measured in this study, the non-management personnel involved in altered workweeks indicated significantly more satisfaction with aspects of the job than the non-management Standard Hours group. However, a comparison of management mean scores did not reveal any significant differences relating to the aspects of job satisfaction measured in this study, with the exception of one case. The one exception was (10) Freedom to handle personal business during the workday, where the Flextime management was significantly more satisfied than Standard Hours management.

These conflicting perceptions could indicate that innovations in the management of time tend to have a more positive impact upon the level of job satisfaction for non-management personnel than they do for management personnel. This could be due to the fact that alterations in the workweek have provided increased autonomy for non-management personnel in certain aspects of their job environment, that have previously only been the perogative of management personnel under a Standard Hours system.

2. There was fairly low consensus among the three

groups concerning the job satisfaction variables that contained the three highest and the three lowest discrepancies. This indicated that various innovations in the allocation ,of time have differing effects on the perceived nature of job satisfaction among management and non-management personnel employed in these various worksites. Therefore the effects of innovations in the management of time upon job satisfaction will vary according to the specific nature of the innovation, and the categorization of personnel within the organization. Thus, any plans to extend these innovations into additional branches in the future should take these factors into account.

3. Significant differences were found among 7 of the 15 items related to the direction of changes in organizational performance, for the management groups of respondents. Similarly, significant differences were found among 9 of these 15 variables for the non-management group. This indicated that all groups of personnel perceived the allocation of time to have a significant effect on many aspects relating to the direction of changes in organizational performance. However, few differences were found between the Flextime and Compressed Hours group indicating that these innovations generally tended to be associated with similar effects in the operation of these worksites. This high degree of consensus among the two groups involved in altered workweeks may reflect some degree

of Hawthorne effect although these findings are consistent with many of the claims from the literature.

4. However, there was fairly low consensus among all three groups concerning the direction of changes for the specific aspects of organizational performance that contained the three highest and the three lowest discrepancies. This indicates that although both management and non-management personnel disclose that the allocation of time has a significant impact on many aspects relating to the direction of changes in organizational performance, the specific nature of this impact tended to vary with the model used for time allocation. Thus if additional branches of this government department were to implement a specific innovation in time, prior consideration should be given to the suitability of this model in relation to it's potential effects upon organizational performance.

5. In addition, the findings disclosed that significant differences were found among 6 of the items related to the importance of changes in organizational performance as perceived by the management groups. Similarly, the non-management groups disclosed that significant differences were obtained for 6 of the 15 items relating to the importance of changes in organizational performance. Thus both management and non-management personnel employed across these workweek structures considered that the allocation of time had significant

effects upon organizational performance. But, there were many significant differences in their perceptions relating to whether or not these changes were of minor or major importance in their respective worksites. However, few differences concerning the importance of changes were found among the twc groups involved in altered workweeks, which may also reflect some degree of Hawthorne effect. In every case these groups considered a given change to be more important than the Standard Hours group.

6. Further examination of the discrepancy rankings associated with the importance of changes in organizatonal performance revealed that there was considerable dissensus among these groups concerning the organizational performance variables that contained the three highest and the three lowest discrepancies. Again, this suggested that although both management and non-management personnel across these workweek structures indicated that the allocation of time has a significant impact on many aspects of organizational performance, the degree of importance associated with this change tended to vary with the model of time allocation employed at the various worksites. Thus if some of these changes are not perceived as being very important by personnel in these various worksites, then little improvement would be expected in factors such as individual output.

7. It was found that that the management personnel

involved in these different workweek structures did not perceive any significant changes in family interaction and personal relationships associated with the allocation of time. However, this lack of change in two of these variables, namely (1) Management of family affairs and (2) Amount of time spent with friends was perceived as being more important to the Compressed Hours group than it was for the Flexible and Standard Hours group of managers. On the other hand, among the non-management groups of respondents significant differences were found for two variables concerning both the direction and importance of changes in family interaction and personal relationships. These were: (1) Management of family affairs and (4) Time available to organize personal business affairs.

Here again, the impacts associated with different methods of time allocation were more widely felt by non-management respondents. In most of these cases, at least one of the groups involved in altered workweeks noted a more significant improvement in these family relationships than was indicated by the Standard Hours respondents. This improvement in social contacts among non-management personnel, could contribute towards an increase in the retention rate of non-management personnel in these worksites. Lower level organizational members may be reluctant to leave these worksites unless similar conditions are present elsewhere.

8. A further important finding of this study was that for 10 of the 14 items where important differences were found relating to decreased participation in leisure activities, the two groups involved in altered workweeks noted a greater decline than the Standard Hours group. Furthermore, for one item, namely, 'The level of boredom associated with leisure' the two groups involved in altered workweeks indicated that they had experienced a significantly greater increase in boredom than the Standard Hours group.

These findings strongly contradict the leisure benefit claims associated with restructured workweeks as outlined by researchers such as Tandan (1973), and Swartz (1974). This decline in participation in leisure activities and increased boredom noted by these two groups involved in altered workweeks could indicate a need for increased effort and expenditure in recreational programs, if organizational employees are to make effective use of their increased leisure time. Unless expenditures for the provision of additional recreation facilities are forthcoming in the near future, there may be a considerable decline in the demands of organizational members for innovations such as the Compressed workweek because of this problem of increased boredom associated with greater leisure.

9. Finally, it was found that the two groups involved in restructured workweeks made greater utilization

of the public transit system than the Standard Hours group. Furthermore, the innovative group made greater use of car pools, and tended to draw more members of their car pools from outside of their immediate family than the Standard Hours group. Thus, if organizational policy is directed towards decreasing pollution levels and traffic congestion in cities such as Edmonton it appears that alleviations in the workweek have a positive contribution to make towards this goal.

B. Intra-Group Analyses

In the second section of the analysis, intra-group perceptions of organizational operations were examined.

1. First, significant differences between management and non-management perceptions of job satisfaction within each of the workweek structures were examined.

Standard Hours group. It was found that significant differences were obtained among 6 of the 10 job satisfaction variables, and in each case the management mean indicated a higher degree of job satisfaction than the non-management personnel. Thus, in the future demands for a re-structuring of the workweek in some of these branches may be expected to arise from dissatisfied non-management personnel.

Compressed Hours Group. Here, only two variables were found to be significantly different and in each case the management personnel indicated a higher degree of satisfaction from the non-management personnel. These were: (2) The way in which the program is organized and (5) The way in which your immeidate supervisor is administering the program. This could indicate the need for increased communication between administrative and non-administrative personnel, so that the latter group may gain additional insights into the reasons underlying the organization and administration of the Compressed Hours program and hence increase their commitment to, and satisfaction with, these aspects of a Compressed Hours schedule.

Flexible Hours group. Similarly, for this only two variables were found to contain significant differences, and in each case the management personnel were significantly more satisfied than the non-management personnel. These were (3) The method of keeping track of hours worked each day, and (8) Your utilization of service provided by the bus system. To improve the level of job satisfaction of Flextime non-management employees a review of time keeping practices could be undertaken, and revisions undertaken where necessary. However, the latter issue may be directly related to the nature of the service provided by the Edmonton public transit system which is currently under review, and in the future some of these problems may be resolved.

2. An examination of the comparative discrepancy ranking for job satisfaction within each group indicates the major areas of consensus and dissensus. Reference to these

discrepancy ranks could provide information that may contribute to more effective policy decisions directed towards improvements in the level of job satisfaction of organizational members at these various worksites.

3. In addition, an examination of the means used to determine the discrepancy rankings showed that for Standard Hours respondents, the non-management group were less satisfied than the management group with all variables related to job satisfaction. Thus if some form of altered workweek is to be adopted in the future in these branches, advance consultation with non-management personnel would be desirable if any changes in the allocation of time are to be effective.

4. On the other hand an examination of the means employed to determine the discrepancy rankings within the Compressed and Flexible Hours group, showed that the non-management personnel noted a higher level of job satisfaction than the management personnel for almost all of the job satisfaction variables. Then if for some reason, one of these branches was to revert to a Standard Hours system, a considerable amount of job dissatisfaction could be anticipated among non-management members.

5. Furthermore, differences between management and non-management perceptions relating to organizational performance were examined.

Standard Hours Group. Concerning the direction of changes in organizational performance it was disclosed that significant differences were obtained for only two of the 15 variables. Thus, in most cases management and non-management personnel agreed on the direction of changes in organizational performance that have occurred in these branches over the last 12 months. Furthermore, no significant differences were found among these 15 items concerning management and non-management perceptions relating to the importance of any changes in organizational performance. This high degree of consensus among management and non-management personnel concerning changes in organizational performance could provide an effective basis for dialogue among organizational members regarding the potential effects arising from the future implementation of some form of altered workweek.

Compressed Hours Group. An examination of pairs of means related to the direction of change in organizational performance revealed that significant differences were found between three pairs of mean scores. Two of these pairs were: (1) Availability of people with whom you must work; (2) Availability of others for 'spur of the moment' discussions on phone calls. Both of these variables are related to the factor 'Organizational Communication', and in both cases the management mean was higher than the non-management mean indicating the latter group noted greater improvement in organizational communication. Thus the longer working day may have provided increased contact time for communication between non-management personnel with other organizational members and this may contribute to organizational effectiveness.

Flexible Hours Group. For mean scores related to the direction of change in organizational performance, only two of the 15 items contained significant differences. These were: (1) Travel to and from work; and (15) The availability of services such as dining rooms, elevators and cafeterias. In both cases the management group mean exceeded the non-management mean score, indicating the latter group perceived greater improvement in these items. For both of these variables management personnel may have experienced greater freedom under a Standard Hours system than non-management personnel, and the Flexible Hours system may have contributed to greater autonomy in these areas for non-management personnel in these branches.

6. An examination of the comparative discrepancy rankings concerning the direction and importance of changes in organizational performance within each group indicated the major areas of consensus and dissensus. Reference to these discrepancy ranks could provide information that may contribute to more effective policy decisions directed towards improvements in the level of organizational performance at these various worksites.

7. Further examination of the means used to

determine the discrepancy rankings showed some general trends. Within the Standard Hours group, the non-management personnel found the direction of change for 9 of the 15 organizational performance variables to be less acceptable than the management group perceptions. In addition, the management group indicated that changes in 9 of these 15 items was of less importance than the non-management group perceptions. Thus Standard Hours non-management personnel considered many changes in organizational performance to be less acceptable, and the need for changes to be very important. Thus, if organizational effectiveness is to be maximized, additional changes in many of these factors may be necessary.

8. On the other hand, an examination of the means used to determine the discrepancy rankings for the Compressed Hours group showed the following trend. It was found that for 8 of the 15 variables the non-management group perceived changes in the direction of organizational performance to be more acceptable than management personnel. However, within this Compressed Hours branch the non-management group perceived changes on 8 of these 15 items to be of lesser importance than the management group. Thus management and non-management personnel were fairly clearly divided in their opinions concerning changes in the direction and importance of these organizational performance variables, although many of these differences were not statistically significant.

9. Alternatively, further examination of the means used to determine the discrepancy rankings for the Flextime group revealed that for 11 of the 15 variables associated with the direction of changes in organizational performance, the non-management group perceived these changes to be more acceptable than management personnel. Similarly, it was found that for 12 of the 15 variables focusing upon the importance of changes in organizational performance, the non-management group attributed greater importance to any changes that have occurred since Flextime was implemented. Thus Flextime appears to have had a greater impact upon non-management perceptions of changes in organizational performance. These divergent perceptions concerning the degree of impact of Flextime upon organizational performance could provide a basis for future conflict among management and non-management personnel should a decision be made to revert back to a Standard Hours system. Therefore it is essential that management personnel gain a clear understanding of the non-management viewpoint if any meaningful discussions are to occur in the future concerning the allocation of time.

10. Additional analysis focussed upon significant differences between management and non-management perceptions relating to changes in family interaction and personal relationships and the allocation of time within this organization.

Standard Hours Group. It was found that significant differences were obtained between two pairs of mean scores relating to the direction of change in family interaction and personal relationships. These were: (2) Amount of time spent with family, and (3) Amount of time spent with friends. In both cases the management group perceived greater deterioration in changes relating to these items.

Thus the continuation of a Standard Hours system in some of these branches may be placing strain upon the family interaction and personal relationships of many management personnel, and this may prove to be an important reason underlying any management demands for a re-structured workweek.

Compressed Hours Group. The findings showed that no significant differences were obtained between the pairs of means for these items relating to the direction of changes in family interaction and personal relationship. Furthermore, the findings revealed that only one pair of mean scores was significantly different, concerning perceptions relating to the importance of changes in family interaction and personal relationships. For variable (3) Amount of time spent with friends, the management group indicated that any change in the amount of time they spent with their friends, was less important to them than it was to the non-mangement personnel. Thus the extra day off, every two weeks under this Compressed Hours system, can be seen to be potentially very important for the social contact of non-management personnel, and this may be an important motive underlying their desire to retain this system.

Flexible Hours Group. The findings showed that significant differences were found between pairs of mean for all four items focusing upon the direction of changes. These were: (1) Management of family affairs, (2) Amount of time spent with family, (3) Amount of time spent with friends, and (4) Time available to organize your personal business affairs. In all cases the non-management group perceived greater improvement in family interaction and personal relationships since the introduction of Flextime. Thus, Flextime has contributed towards a significant improvement in many aspects of family interaction and personal relationships for non-management personnel, and because of the strong impact that Flextime has had upon Family Relationships for this group any attempt to revert back to a Standard Hours system may receive strong resistance from non-management personnel.

11. A further section of the analysis examined the relationship between the personal characteristics of the respondents and their perceptions of job satisfaction. First, for the Standard Hours Group some significant relationships were found to exist between the Standard Hours group perceptions of job satisfaction and all personal variables except 'The number of dependents who require

assistance before and after work.' However, in only four cases did the obtained correlation co-effficients exceed .40. Secondly, for the Compressed Hours group, very few significant relationships were found between the Compressed Hours personal variables and their perceptions of job satisfaction, and in only three instances did the obtained correlation co-efficients exceed .40. Thirdly, for the Flexible Hours group, few significant correlations were obtained, and none of the obtained correlation co-efficients exceeded .40. Generally, it was found that the personal characteristics of all groups of respondents were not significantly related to their perceptions of job satisfaction.

12. Further analysis focused upon the relationship between the personal characteristics of the respondents and their perceptions of organizational performance. First for the obtained correlation co-efficients focusing upon the direction of changes in organizational performance, it was found that none of the correlation co-efficients for the Standard and Flexible Hours groups exceeded .40. However, for the Compressed Hours group 8 of the obtained correlation co-efficients exceeded .40.

On the other hand, for the correlation co-efficients associated with the importance of changes in organizational performance, again no significant correlations exceeding .40 were obtained for the Standard and Flexible Hours groups.

Alternatively, for the Compressed Hours group two of the obtained correlation co-efficients exceeded .40.

Here again, it was generally found that the personal characteristics of respondents were not significantly related to their perceptions of changes in organizational performance. Only the Compressed Hours group obtained some correlation co-efficients greater than .40,

13. With the assistance of the Personnel Branch data was gathered relating to a number of indicators of operational costs for these branches.

Flexible Hours Group. The implementation of flexible working hours had been associated with a change in a number of indicators of operational costs. On average, the largest change for all branches was found for the data relating to absenteeism rates, where a 78.6 percent average increase was reported for all branches. If Flextime is used effectively, it should contribute towards a decline in absenteeism, and thus it is recommended that some of the reasons underlying this increase in absenteeism be investigated further. This high average increase in absenteeism has been greatly effected by the 353.5% increase that occurred in one branch. On the other hand in one branch absenteeism declined by 44.7%. This overall average increase could also be due to a combination of other factors such as increased staff size; greater illnesses amongst some organizational members; or poor management of Flextime by some personnel. In contrast to this finding the smallest change reported in this data related to changes in labor turnover, where a 0.91 percent average decline was recorded. It would appear that the high level of job satisfaction of Flextime employees is reflected in the slight decline in labor turnover for these branches.

Compressed Hours Group. Similarly, the implementation of this Compressed Hours model had also been associated with changes in a number of indicators of operational costs. The largest reported change involved a 25 percent decline in the number of days overtime worked by this staff. On the other hand, the smallest change was a slight 3.7 percent increase in the total number of paid days for which respondents were absent from the worksite. Thus, the implementation of a Compressed Hours model has contributed significantly to a decline in paid overtime, which could reflect higher productivity in a given workday. Also paid absences have only shown a very slight increase despite the increase in the length of the workday, and thus any increase in the level of fatigue may not have resulted in increased illnesses.

14. Furthermore, the implementation of various innovations in the management of time has been associated with a number of changes in the pattern of working hours of respondents. The implementation of the Flextime model had been associated with a considerable number of changes in the pattern of working hours of Flextime organizational members.

Important changes were found to occur among the following aspects of the arrangement of working hours: Departure from home, Arrival at work, Commencement of lunch break, Termination oflunchbreak, Depature from work, and Arrival at home. Similarly, the pattern of working hours of Compressed Hours respondents also involved a number of important changes. The pattern of working hours was determined either directly or in consultation with the supervisor and the following aspects of working hours underweent important changes: Departure from home, Arrival at work, and Commencement and Termination oflunchbreak. However smaller changes were found concerning the time employees departed from work and arrived at home.

Thus if working scheduling and organizational communication is to be effective it is important that these changes in the pattern of working hours be incorportated as a key factor in decision making in these areas.

15. Further investigation focused upon the impact of the Compressed Hours model upon the level and composition of consumption spending of Compressed Hours respondents. The findings disclosed that for this particular branch only a small percentage of respondents inciated an increase in their level of consumption spending, and furthermore only a small percentage of respondents indicated any change in the composition of their consumption expenditure. Thus, these findings do not support those reported in the studies

reported by Poor (1972) where it was found that up to one-third of the workers reported an increase in the level of consumption expenditure.

16. In addition, the claims made by Carmel (1973) also were not supported by this study, as it was found that the implementation of a Compressed Workweek, and not created any serious child-minding responsibilities for these respondents and only 3.2 percent of the respondents employed a paid babysitter. This could also be due to the fact that a large percentage of the personnel were single women without families.

17. It was found that only one-fifth of the Standard Hours respondents expressed a negative interest concerning the adoption of some innovation in the management of time. The remaining four-fifths of the respondents were almost equally divided in their preferences for a Flextime or a Compressed Hours model. This finding would suggest that in the future their is considerable potential among this group to express a strong desire for a change in the pattern of working hours in their branches. If such changes are not forthcoming a considerable decline in the level of job satisfaction and organizational performance might be expected to occur.

18. No significant differences were found among both management and non-management mean scores concerning the model of time allocation employed in their branches and the

service they provide to other branches. However, concerning the service they provide to the public, all groups noted some improvement, but the greatest improvement was recorded by the Flextime respondents. The clients of these branches involved in altered workweeks indicated some changes in the provision of service to the public, but in most cases the majority of respondents indicated no changes at all. However, in the Flextime branches some deterioration in (1) Availability of specific personnel with whom you must communicate and (2) Availability of personnel for 'spur of the moment discussions and phone calls' was recorded. However, only a small minority of respondents presented this viewpoint, but some further investigation into the nature of this service may be necessary.

RECOMMENDATIONS FOR FURTHER RESEARCH

1. This study focused upon total personnel, management and non-management perceptions of alternations in the workweek and changes in organizational operations within the Alberta Department of Education. Many other educational organizations could be identified that have utilized some innovation in the management of time, such as schools, and other populations could be surveyed to determine the nature of organizational change. Such populations could include parent, student, teachers andcommunity leaders.

2. It is recommended that further studies could be directed at cross sectional analyses. Other government

departments, or education departments in other provinces, could serve as a basis for comparative research, if they utilized similar innovations in the allocation of time.

3. Time series studies could be undertaken in the same organization in following years to determine the stability of perceptions associated with alterations in the workweek. If the findings from a study of this nature are to be used as a basis for policy decisions, then time series analyses would be highly recommended by the researcher.

4. This study has adopted a macro view of many factors related to organizational change and alterations in the workweek. Many of these factors could serve as a basis for detailed micro investigation such as the effects of restructuring the workweek upon commuting patterns, leisure activities, job satisfaction, organizational performance and so on. As yet little detailed information is available for concerning the effects of change in any of these areas, and the potential for a great deal of future research is readily apparent.

5. Hage and Aiken (1970), Rogers (1962) and Bhula (1965) have emphasized the differential rate of adoption of innovations within organizations. Further studies focusing upon the adoption of various innovations in the management of time, could examine the contribution of factors such as Centralization, Formalization, Stratification, Efficiency and Output, that these authors have identified as key

antecendent variables effecting the rate at which innovations are adopted within an organization.

BIBLIOGRAPHY

Appelbaum, R.
1970 *Theories of Social Change*. Markham Publishing Company.

Argyris
1972 "Personality and Organization Theyory Revisited:" in *Administrative Science Quarterly* Vol. 18 No. 2.

Becker, Gary
1965 "A theory of the allocation of time" in *The Economic Journal* September 1965 Vol. LXXV, No. 299, pp. 493-517.

Belasco, James A. and Joseph A. Alutto
1972 "Decisional Participation and Teacher Satisfaction," *Educational Administration Quarterly,* Vol. 8, No. 1, 44158.

Bennis, W. et al
The Planning of Change. Hold, Rinehard and Winston, Inc.

Campbell, A. and Converse, P.
1972 *The Human Meaning of Social Change*. Russell Sage Foundation, New York.

1965 *Women at Work in Canada.* Ottawa: Government Publicaton, D.B.C.S.

Canada Department of Labour
1971 *Women in the Labour Force.* Ottawa: Government publication, Statistics, Canada.

Carmel, Alan S.
1973 *"Compressed Work Week and Womens Employment"* in Hameed and Paul, op.cit.

Child, John
1974 "What Determines Organization. The Universals vs. The it-all-depends" in *Organizational Development.* Vol. 3, No. 1.

Coleman, Peter

1972a "Organizational Effectiveness in Education: Its Measurement and Enhancement", Interchange, Volume 3, Number 1, 35-45.

1972b "The Perils of Bigness," Educational Administration Quarterly, Volume 8, Number 2, 58-78.

Dennison, E.F.
1962 The Sources of Economic Growth in the United States. Committee for Economic Development. New York.

Dominion Loose Leaf Company
1972 Article reported in Montreal Gazette, June 1, 1972.

Edmonton City Project
1972 Article reported in Montreal Gazette, June 1, 1972.

Edmonton Journal
1975 "Four Day School week gets a mixed reception", Stillwater, Minnesota, p. 22.

Elbing, et.al.
1974 "Flexible Working Hours: its about time" in Harvard Business Review, Jan-Feb. 1974. pp. 18-30.

Etzionni, A and Etzioni-Halevy, E.
1973 Social Change, Sources, Patterns and Consequences. Basic Books Inc., New York.

Etzioni, A.
1964 Modern Organizations. Englewood Cliffs. New Jersey: Prentice Hall.

Ferguson, G.A.
1971 Statistical Analysis in Psychology and Education. McGraw Hill Book, Co.

Goodale and Aagaard
1975 "Factors Relating to Varying Reactions to the 4 day work week." in Journal of Applied Psychology. Vol. No. 1. pp. 33-38.

Golembiewski, R. et.al.
1974 "Longtitudinal study of Flexi-time effects: some consequences of an OD Structural Intervention" in *Journal of Applied Behavioural Science.* Vol. 10. No. 4. pp. 503-532.

Hall, Richard H.
1972 *Organization: Structure and Process.* Englewood Cliffs, New Jersey: Prentice Hall, Inc.

Hameed, S.M.A. and Paul, G.S.
1973 *3 or 4 Day Work Week.* Faculty of Bus. Admin. University of Alberta.

Hameed, S.M.A.
1973 *"4 day, 32 Hour Work Week: Analysis and Prospects"* in *"3 or 4 Day Work Week".* S.M.A. Hameed and G.S. Paul (Editors). Faculty of Business Admin. University of Alberta.

Hameed, S.M.A.
1974 "A theory of the hours of work and non work" in *Indian Journal of Industrial Relatons.* Vol. 7, No. 4, April, pp. 498-519.

Harrison, G.
1972 *Report on the Compressed Work Week.* Montreal: Riddell, Stead and Associates Ltd.

Harrison, G. and Matsasalu
1971 Report on the Shortened Work Week. Montreal: Samson, Balair, Riddell and Stead Inc.

Hellreigel, D.
1972 "The Four-Day Workweek: A Review and Assessment" in *M.S. U. Business Topics.* Graduate School of Business Admin. Michigan State University. pp. 39-48.

Henderson
1973 *"The four day week: Its impact on work behavior"* in Hameed and Paul, op.cit.

Hersey, Paul. and Kenneth Blanchard

1960 *Work and the Nature of Man.* Cleveland: World Publishing Co.

Immegart, G. and Pilecki, F.
1973 *An Introduction to Systems for the Educational Administrator.* Additon - Wesley Publishing Co.

Information Canada
1970 *Report of the Royal Commission on the Status of Women in Canada.* Ottawa: Government Publication, Information Canada.

Ivaneevich
1974 "Effects of the shorter work week on selected satisfaction and performance masures" in *Journal of Applied Psychology.* Vol. 59, No. 6 pp. 717-721.

Kerlinger, F.
1971 *Foundations of Behavioural Research.* Holt, Rinehart and Winston, Inc.

Likert, Rensis
1967 *The Human Organization.* New York, McGraw Hill Book Co. p. 26-29.

Marshall, A.
1948 *Principles of Economics.* 8th Ed. McMillan. New York p. 528.

Maslow, A.H.
1954 *Motivation and Personality.* New York. Harper and Bros.

Mott, Paul E.
1972 *The Characteristics of Effective Organizations.* New York: Harper and Row.

Nanus, B. and Adelman H.
1971 "Profiles of the Future. Work and Leisure 1980" in *Business Horizons.* Vol. 14, No. 4, pp. 5-10.

Netzer, L. et al

1970 Educational Administration and Changes. Harper and Row, New York.

Nord and Costigan
1973 "Worker adjustments to the four day week" in Journal cf Applied Psychology. Vol. 58, No. 1.

Ontario Ministry of Labor, Research Branch
1972 The Compressed Work Week in Ontario. Toronto, Ontario.

Ostry, Sylvia
1968 The Female Worker in Canada. Ottawa, Dominion Burea of Statistics.

Ostry, Sylvia and Zaida, Mahmood, A.
1972 Labour Economics in Canada. Toronto, Macmillan of Canada.

Paul, G.
1973 "Some Socio-Psychological Implications of a Short Week" In Hameed and Paul, op.cit.

Perlman, R.
1969 Labor Theory. New York. Wiley and Sons.

Poor, R.
1970 Four Days, Forty Hours. Bursk and Poor Pub. Massach.

Prebble
1975 The Jordan Plan. Unpublished Ph.D. dissertation, Department of Ed. Admin., Univ. of Alberta.

Price, James L.
1968 Organizational Effectiveness, Homewood, Illinois: Richard D. Irwin.

1972 "The Study of Organizational Effectiveness," The Sociological Quarterly, 13:3-15.

Robbins, L.

1930 "On the elasticity of demand for income in Terms of Effort" Economica, 10 (June 1930) pp. 123-129 reprinted in Readings in the Theory of Income Distribution , Blakiston Co. Philadelphia. p. 287-294.

1972 "The four day work week" in Recreation Review. Vol. 2, No. 3, May 1972.

Rogers, E. and Shoemaker, F.
1971 Communication of Innovations. Free Press, New York.

Rogers, E.
1962 Diffusion of Innovations. The Free Press, New York.

Rose, J.B. and Banner, David K.
1973 "The Psychological and Sociological Impliations of Increased Leisure Time" in Hameed and Paul, op. cit.

Smith, K.U.
1962 "Work Theory and Economic Behaviour" Indianna Business Paper No. 5, Bureau of Business Research.

Steers, Richard M.
1975 "Problems in Measurement of Organizational Effectiveness". Administrative Science Quarterly, 20: 546-558.

Stillwater, Minnesota
1975 Article in Edmonton Journal, "Four Day week gets a mixed reception" Wed. Oct. 29th, Edmonton, Alberta.

Swimmer, David
1973 "Recent experiences with a three or four day week" in Hameed and Paul, op. cit.

Tandan, N.K.
1973 Compressed Work week and multiple job holding" in Hameed and Paul, op.cit.

Tilgher, A.
1962 "Work through the ages" in Simund Noscow and William H. Form (eds) . Man, Work and Society. New York Basic Book Inc.

Vroom
1964 Work and Motivation. John Wiley and Sons Inc.

Winer, B.J.
1962 Statistical Principals in Experimental Design. McGraw Hill Book Co.

Winnipeg Imperial Oil Enterprises Refinery
1973 Article in Canadian Industrial Relations and Personnel Developments. No. 21, May 1973.

Yuchtman, E., and S.E. Seashore
1967 "A Systems Resource Approach to Organizational Effectiveness", American Sociological Review, 32: 891-903.

APPENDIX A

Functional Analysis of Organizational Chart for the Alberta Department of Education

FUNCTIONAL STATEMENTS TO SUPPLEMENT ORGANIZATION CHART

DEPARTMENT OF EDUCATION

NOVEMBER, 1975

1. DEPUTY MINISTER - Administers, coordinates and controls the departmental functions in the kindergarten to Grade 12 system including consultancy services to schools, curriculum development and advisory and developmental services to school districts.

2. ASSOCIATE DEPUTY MINISTER (Instruction) - Administers and coordinates the operations and programs of the Field Services, Curriculum, Early Childhood Services and Special Educational Services Branch.

3. ASSOCIATE DEPUTY MINISTER (Support) - Administers and coordinates the operations and programs of the Testing & Evaluations, School Building Administration, Personnel Services, Alberta Correspondence School and the School Book Branch.

4. DIRECTOR OF CURRICULUM - Coordinates, develops, distributes and evaluates programs of study for the education of students in grades one to twelve.

5. ASSOCIATE DIRECTOR OF CURRICULUM - Coordinates and assists in the development and evaluation of curriculum for the appropriate levels and specialties; evaluates texts and reference books.

6. DIRECTOR OF EARLY CHILDHOOD SERVICES - Coordinates the planning, development, implementation, and evaluation of programs relating to all aspects of the education of the young child (ages 3 to 6).

7. COORDINATOR, ECS - (a) Coordinates provincial in-services programs for Early Childhood Services including defining needs, developing objectives and building suitable programs for use by Early Childhood field consultants and local personnel. (b) Examines and evaluates Early Childhood Program proposals and makes recommendations regarding funding of the programs.

8. CONSULTANT - Provide regulatory and developmental consultation to school system, school, pupil, and public groups on instructional programs and procedures.

9. DIRECTOR OF FIELD SERVICES - Provides oversight and leadership for all policies, plans, programs and activities in the Field Services Branch including responsibility for the coordination of consultation, informational, evaluative, supervisory and instructional inspection activities.

10. ASSOCIATE DIRECTOR OF FIELD SERVICES - (a) Administers, coordinates and supervises the activities of regional offices which provide regulatory, consultative, evaluative and developmental services to boards and schools as needed. (b) Administers, coordinates and supervises budget and financial analyses of school boards, FAS implementation, debenture processing and special studies (e.g. transportation).

11. COORDINATOR OF THE REGIONAL OFFICES (5) - Conduct surveys, evaluations and assessments in specific areas as requested and provides consultancy services to school boards throughout the province to ensure high standards of education.

12. FIELD ADMINISTRATIVE OFFICER - Provide regulatory and developmental consultation to school systems on administrative and business management programs and procedures.

13. DIRECTOR OF SPECIAL EDUCATIONAL SERVICES - Provides general oversight of all aspects of special education, including the education of the handicapped child and the disbursement of monies from the Learning Disability Fund.

14. ALBERTA SCHOOL FOR THE DEAF - Directs the total administrative, educational, child care programs and related ancillary services for deaf children between the ages of three and eighteen.

15. SUPERVISOR OF GUIDANCE - Provides direction and support for the development of school counselling services for grades one to twelve.

16. SUPERVISOR OF SPECIAL EDUCATION - Administers programs that provide and/or support educational services to those handicapped children who require educational assistance beyond what is normally available in regular school programs.

17. COORDINATOR, EDUCATIONAL OPPORTUNITIES FUND - Administers the Educational Opportunities Fund by reviewing and approving proposals to upgrade elementary education and to provide compensatory education at all levels and by supervising the disbursement of EOF funds.

18. REGISTRAR - Evaluates, certifies and assesses qualifications of all teachers employed in Alberta Schools.

19. DIRECTOR, FINANCE, STATISTICS & LEGISLATION - Provides general department administration, and budgeting services, statistical information, drafting of legislation and regulations, and payment of school grants.

20. DIRECTOR OF COMMUNICATIONS - Establishes and maintains effective communications between the department and the general public.

21. DIRECTOR, PLANNING & RESEARCH - Identifies problems, coordinates developmental research, generates policy alternatives, and assesses the implications and cross-impacts of each as these relate to basic education.

22. DIRECTOR, STUDENT EVALUATION & DATA PROCESSING SERVICES - Plans, organizes and directs all phases of the information systems operations (EDP) for the Department of Education; develops and implements testing services and records student achievement, and provides statistical information to other branches, school boards and students.

23. DIRECTOR, SCHOOL BUILDINGS ADMINISTRATION - Provides general supervision of all provincial school buildings including debenture allocations and approval of funds for school buildings and renovations.

24. ASSOCIATE DIRECTOR, SCHOOL BUILDINGS ADMINISTRATION - Assists Director SBA.

25. DIRECTOR, PERSONNEL SERVICES - Develops and administers a personnel program to advise and assist all branches in matters of classification, pay, recruitment, selection and employee counselling.

26. ASSISTANT DIRECTOR - PERSONNEL SERVICES - Assists the Director in carrying out his functions. Has special responsibility for recruitment of personnel for all branches of the Department.

27. DIRECTOR, ALBERTA CORRESPONDENCE SCHOOL - Administers the Correspondence School branch by organizing the program and staff and performing the budgeting and staffing. This provides educational services by correspondence to students who might not otherwise obtain the educational services needed.

28. ASSISTANT DIRECTOR, ALBERTA CORRESPONDENCE SCHOOL - Supervises other immediate supervisors. Assists the Director. Organizes new projects, testing.

29. MANAGER, SCHOOL BOOK BRANCH - Supervises and directs the operation of the branch, negotiates with publishers for book prices, discounts and delivery.

30. ASSISTANT MANAGER, SCHOOL BOOK BRANCH - Assists the manager in purchasing, inventory control, sales, delivery, etc.

31. DIRECTOR, ALBERTA EDUCATIONAL COMMUNICATIONS AUTHORITY - Acts as liaison between Alberta Educational Communications Corporation and the two Departments of Education in developing guidelines as to program content and its distribution.

APPENDIX B

Factor Analysis for Pilot Study on Instrumentation

Table 121

Factor Analysis for Pilot Study - Job Satisfaction

Varimax Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3
V1	0.65354	0.44345	-0.05443
V2	0.70524	0.41381	0.04435
V3	0.71926	0.06313	0.02985
V4	0.26875	0.62244	-0.08846
V5	0.77652	0.29447	0.08548
V6	0.00911	-0.06390	0.76316
V7	0.06531	0.95637	0.59875
V8	0.35320	0.33445	0.27794
V9	0.47374	0.23378	0.31315
V10	0.19495	0.88841	0.10947

Transformation Matrix

	Factor 1	Factor 2	Factor 3
Factor 1	0.78523	0.59585	0.16839
Factor 2	-0.02627	-0.23965	0.97858
Factor 3	-0.61864	0.76650	0.17[illegible]52

Table 122

Factor Analysis for Pilot Study - Organizational Performance

Varimax Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
V1	-0.05053	0.26638	0.39762	0.18497	0.00354	0.09756
V2	0.39698	0.26536	0.52066	0.59078	-0.14362	-0.08569
V3	0.48155	-0.07055	0.24146	0.22542	0.07303	0.69948
V4	0.19956	0.02747	0.11161	0.70415	-0.09157	0.31197
V5	0.78136	-0.12381	-0.00970	0.18373	-0.02827	0.10750
V6	0.32713	0.27255	0.12288	0.06634	0.87932	0.05096
V7	0.39259	0.26774	0.04264	-0.06693	0.64823	0.17011
V8	0.56575	-0.04977	0.20548	0.25579	0.42704	-0.08880
V9	0.63605	0.17864	0.14121	0.11901	0.22763	0.11362
V10	0.90360	0.03164	0.10600	-0.08084	0.20707	0.09108
V11	-0.09861	0.38826	0.08577	0.20409	0.36301	0.27964
V12	0.02785	0.12276	0.03114	0.35070	0.21242	0.02752
V13	0.27374	0.07134	0.93867	-0.14032	0.11085	0.06931
V14	0.08654	-0.03997	0.70044	0.21496	0.15923	0.26857
V15	0.06422	0.23297	0.19187	0.10463	0.11811	0.53282
V16	-0.09015	0.61949	0.12132	0.25649	0.19120	0.16070
V17	0.14852	0.58752	0.04304	0.11338	0.2051[illegible]	-0.23628
V18	0.17690	0.91946	-0.01449	0.04654	-0.03[illegible]3	0.17166
V19	-0.24162	0.70615	0.23949	-0.13880	0.36240	0.11421

Transformation Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Factor 1	0.66655	0.41143	0.42498	0.28415	0.41522	0.27577
Factor 2	-0.61688	0.75523	-0.04892	-0.09258	0.21229	-0.02062
Factor 3	-0.33925	-0.04519	0.58403	0.42443	-0.52776	0.27292
Factor 4	0.21853	0.30658	-0.63498	0.55121	-0.38159	0.09507
Factor 5	-0.25557	-0.29265	-0.76930	0.04809	0.34330	0.81015
Factor 6	-0.25913	-0.28048	-0.01565	0.65146	0.49043	-0.43476

APPENDIX C

Correlation Analysis for Pilot Study on Instrumentation

Table 123

Pearson r Correlation Co-efficients for Pilot Study - Standard Hours Group[b]

Variable		Question 16			Question 17						
Age	Pearson Prob.	Var. 1 -0.3878 0.013	Var. 8 -0.3489 0.025		Var. 3 -0.3439 0.025	Var. 8 -0.3722 0.016	Var. 9 -0.4447 0.005	Var. 10 -0.3398 0.029	Var. 13 -0.3923 0.012	Var. 15 -0.3618 0.019	Var. 16 -0.2982 0.049
Income	Pearson Prob.	Var. 1 -0.4632 0.004[a]	Var. 2 -0.3331 0.034	Var. 8 -0.3321 0.036	Var. 3 -0.3079 0.046	Var. 9 -0.4814 0.003[a]	Var. 10 -0.3211 0.042	Var. 11 0.3344 0.035	Var. 13 -0.4305 0.008[a]		
Number of Children	Pearson Prob.	Var. 8 -0.3461 0.035			Var. 2 -0.4451 0.008[a]	Var. 9 -0.3753 0.022	Var. 10 -0.3402 0.038	Var. 11 -0.3446 0.036	Var. 13 -0.3703 0.024	Var. 14 -0.3290 0.041	
Number of Members in Commuting Group	Pearson Prob.	Var. 7 -0.3920 0.039	Var. 10 -0.3810 0.044		Var. 1 -0.4379 0.024						

[a] Significant at .01 probability level.

[b] All other correlation co-efficient significant at .05 probability level.

Table 124

Pearson r Correlation Co-efficients for Pilot Study - Compressed Workweek Group[b]

Variable		Question 16				Question 17			
Age		Var. 3	Var. 5	Var. 7	Var. 10				
	Pearson	-0.3929	-0.3402	-0.3893	-0.3489				
	Prob.	0.011	0.023	0.033	0.020				
Income						Var. 1	Var. 4		
	Pearson					-0.3294	-0.2885		
	Prob.					0.027	0.046		
Number of Children								Var. 16	Var. 17
	Pearson							-0.3024	-0.2971
	Prob.							0.041	0.047
Number of Members in Commuting Group						Var. 1	Var. 6	Var. 19	
	Pearson					0.3978	0.3674	0.4603	
	Prob.					0.022	0.035	0.010[a]	

[a] Significant at .01 probability level.

[b] All other correlation co-efficients significant at .05 probability level.

Table 125

Pearson r Correlation Co-efficients for Pilot Study - Flextime Group[b]

Variable		Question 16			Question 17						
		Var. 1	Var. 2	Var. 8	Var. 5	Var. 12					
Age	Pearson	-0.3764	-0.3182	-0.3612	10.3429	-0.2992					
	Prob.	0.015	0.038	0.019	0.025	0.045					
		Var. 3			Var. 1	Var. 11	Var. 14	Var. 15	Var. 16	Var. 18	Var. 20
Income	Pearson	-0.4353			-0.4096	-0.2977	-0.3516	-0.3474	-0.3852	-0.3053	-0.3052
	Prob.	0.006[a]			0.009[a]	0.046	0.022	0.024	0.013	0.042	0.042
		Var. 6	Var. 10								
Number of Children	Pearson	-0.2942	0.3363								
	Prob.	0.048	0.028								
		Var. 5			Var. 5	Var. 7	Var. 13	Var. 19			
Number of Members in Commuting Group	Pearson	0.4176			0.3784	-0.3935	-0.5417	-0.3960			
	Prob.	0.030			0.045	0.039	0.006[a]	0.038			

[a] Significant at .01 probability level.

[b] All other correlation co-efficients significant at .05 probability level.

APPENDIX D

Scheffe Analysis of Variance for Pilot Study on Instrumentation

Table 126

Scheffe Analysis of Variance for Pilot Study - Job Satisfaction*

	Pairs of Means Scores		
Question 16	Flex/Standard	Flex/Comp.	Comp./Standard
Variable[a] 1	S	NS	S[b]
2	S	NS	NS
3	NS	NS	NS
4	S[b]	S[b]	S
5	NS	NS	NS
6	NS	NS	S
7	NS	NS	NS
8	NS	NS	S
9	NS	NS	NS
10	S[b]	S[b]	S

[a] See Appendix J for listing of variables.

[b] Also significant at .01 probability level.

S = significant NS = not significant

* Rather than report the obtained mean and the associated probability, for the purposes of this pilot report ONLY the above summation format was used.

Table 127

Scheffe Analysis of Variance for Pilot Study - Organizational Performance and Direction of Changes

	Pairs of Means Scores		
Question 17	Flex/Standard	Flex/Comp.	Comp./Standard
Variable[a] 1	NS	NS	NS
2	S	NS	NS
3	NS	NS	NS
4	NS	NS	NS
5	NS	NS	NS
6	NS	NS	NS
7	NS	NS	NS
8	NS	NS	NS
9	NS	NS	NS
10	NS	NS	NS
11	S[b]	NS	S
12	NS	NS	NS
13	S	NS	NS
14	NS	NS	NS
15	S[b]	NS	NS
16	S[b]	NS	S[b]
17	S[b]	NS	S[b]
18	S[b]	NS	S[b]
19	S[b]	NS	S[b]

---

[a] See Appendix J for listing of variables.

[b] Also significant at .01 probability level.

S = significant NS = not significant

APPENDIX E

Factor Analysis for Job Satisfaction and Organizational Performance Scores for All Groups of Respondents

Table 128

Factor Analysis of All Respondents Perceptions of Job Satisfaction

Varimax Rotated Factor Matrix

	Factor 1	Factor 2
V1	0.78979	0.28697
V2	0.74872	0.27626
V3	0.63023	0.23275
V4	0.23813	0.71370
V5	0.41520	0.51065
V6	0.34380	0.54595
V7	0.20310	0.34491
V8	0.47848	0.46036
V9	0.44838	0.44852
V10	0.17146	0.71936

Transformation Matrix

	Factor 1	Factor 2
Factor 1	0.71694	0.69713
Factor 2	-0.69713	0.71694

Table 129

Factor Analysis of all Respondents Perceptions for Changes in Direction of Organizational Performance

---

Varimax Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4
V1	0.35328	-0.01582	0.49166	0.02840
V2	0.14830	0.22239	0.59889	0.22093
V3	0.07942	0.16306	0.31002	0.04922
V4	0.06305	0.24767	0.62767	0.18453
V5	-0.09638	0.75396	0.09761	0.07991
V6	0.11666	0.45941	0.21093	0.17575
V7	0.11944	0.69960	0.16641	0.10255
V8	0.11268	0.49221	0.24329	0.33983
V9	0.13923	0.60213	0.16424	0.25623
V10	-0.00433	0.64168	-0.03620	0.03712
V11	0.20021	0.05732	0.58530	0.12179
V12	0.32149	0.10823	0.55564	-0.04676
V13	0.00082	0.28598	0.13950	0.82927
V14	0.02835	0.19666	0.14886	0.70414
V15	0.24840	0.02568	0.44695	0.06217
V16	0.68127	0.06735	0.48029	0.10164
V17	0.84008	0.05008	0.21261	0.01514
V18	0.71387	0.11087	0.15461	-0.01144
V19	0.72915	0.04718	0.27528	0.06823

Transformation Matrix

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	0.53591	0.47113	0.62482	0.31691
Factor 2	-0.59072	0.67515	-0.20180	0.39308
Factor 3	0.32284	0.56333	-0.36257	-0.66856
Factor 4	-0.50954	0.06973	0.66137	-0.54598

Figure 9

Identification of Factors - Job Satisfaction

Factor 1	-	Variable 24 Variable 26 Variable 30	Schedule Monitoring
Factor 2	-	Variable 25 Variable 31	Individual Autonomy
Factor 3	-	Variable 27 Variable 28	Time allocation and travel

Alternatively Variables 22 and 23 cross loaded upon Factors 1 and 2. Furthermore, Variable 29 did not load upon any of the factors when .4 was employed as a cut off point.

Identification of Factors - Organizational Performance

Factor 1	-	Variable 36 Variable 40 Variable 41	Organizational Communication
Factor 2	-	Variable 47 Variable 48 Variable 49 Variable 50	Family and Personal Life
Factor 3	-	Variable 44 Variable 45	Service to the Public
Factor 4	-	Variable 35	Individual output
Factor 5	-	Variable 37 Variable 38	Work Scheduling
Factor 6	-	Variable 46	Availability of Recreation Services

Alternatively Variables 33, 34, 39 loaded across more than one factor and Variables 32, 42, 43 did not load on any factors using .4 as a cut off point for factor relevance.

APPENDIX F

Client Perceptions of Changes in Service To the Public - Questionnaires and Frequency and Percentage Distribution of Responses

HOURS OF WORK QUESTIONNAIRE

SERVICE TO THE PUBLIC

FOR EACH OF THE FOLLOWING, FIRST INDICATE THE KIND OF CHANGE YOU FEEL WHICH HAS OCCURRED SINCE THE INTRODUCTION OF THE COMPRESSED WORK WEEK SECONDLY, IN THE RIGHT HAND COLUMN INDICATE THE IMPORTANCE OF THIS CHANGE.

DESCRIPTION	HAS IMPROVED	IS SAME AS BEFORE	HAS DETERIORATED		OFFICIAL USE ONLY c/c	CHANGE WAS OF MAJOR IMPORTANCE	NO CHANGE IN IMPORTANCE	CHANGE WAS OF MINOR IMPORTANCE		OFFICIAL USE ONLY c/c
1. Availability of specific personnel with whom you must communicate	(1)	(2)	(3)	☐	1	(1)	(2)	(3)	☐	6
2. Availability of personnel 'for spur of the moment' discussions or phone calls	(1)	(2)	(3)	☐	2	(1)	(2)	(3)	☐	7
3. Ability to arrange meetings with specific personnel when necessary	(1)	(2)	(3)	☐	3	(1)	(2)	(3)	☐	8
4. Quality of communication about work assignments	(1)	(2)	(3)	☐	4	(1)	(2)	(3)	☐	9
5. Quality of service provided by branches	(1)	(2)	(3)	☐	5	(1)	(2)	(3)	☐	10

HOURS OF WORK QUESTIONNAIRE

SERVICE TO THE PUBLIC

FOR EACH OF THE FOLLOWING, FIRST INDICATE THE KIND OF CHANGE YOU FEEL WHICH HAS OCCURRED SINCE THE INTRODUCTION OF THE FLEXIBLE WORK WEEK SECONDLY, IN THE RIGHT HAND COLUMN INDICATE THE IMPORTANCE OF THIS CHANGE.

DESCRIPTION	HAS IMPROVED	IS SAME AS BEFORE	HAS DETERIORATED		OFFICIAL USE ONLY c/c	CHANGE WAS OF MAJOR IMPORTANCE	NO CHANGE IN IMPORTANCE	CHANGE WAS OF MINOR IMPORTANCE		OFFICIAL USE ONLY c/c
1. Availability of specific personnel with whom you must communicate	(1)	(2)	(3)	☐	1	(1)	(2)	(3)	☐	6
2. Availability of personnel 'for spur of the moment' discussions or phone calls	(1)	(2)	(3)	☐	2	(1)	(2)	(3)	☐	7
3. Ability to arrange meetings with specific personnel when necessary	(1)	(2)	(3)	☐	3	(1)	(2)	(3)	☐	8
4. Quality of communication about work assignments	(1)	(2)	(3)	☐	4	(1)	(2)	(3)	☐	9
5. Quality of service provided by branches	(1)	(2)	(3)	☐	5	(1)	(2)	(3)	☐	10

Table 130

Frequency and Percentage Distribution for Changes in Service to the Public - Compressed Hours Group

FOR EACH OF THE FOLLOWING, FIRST INDICATE THE KIND OF CHANGE YOU FEEL WHICH HAS OCCURRED SINCE THE INTRODUCTION OF THE COMPRESSED WORK WEEK SECONDLY, IN THE RIGHT HAND COLUMN INDICATE THE IMPORTANCE OF THIS CHANGE.

DESCRIPTION	HAS IMPROVED		IS SAME AS BEFORE		HAS DETERIORATED		CHANGE WAS OF MAJOR IMPORTANCE		NO CHANGE IN IMPORTANCE		CHANGE WAS OF MINOR IMPORTANCE	
	f	%	f	%	f	%	f	%	f	%	f	%
1. Availability of specific personnel with whom you must communicate			3	100					3	100		
2. Availability of personnel 'for spur of the moment' discussions or phone calls			2	66.6	3	33.3			3	100		
3. Ability to arrange meetings with specific personnel when necessary			3	100					3	100		
4. Quality of communication about work assignments			2	66.6	1	33.3			3	100		
5. Quality of service provided by branches			2	66.6	1	33.3			3	100		

Total N = 3

Table 131

Frequency and Percentage Distribution for Changes in Service to the Public - Flexible Hours Group

FOR EACH OF THE FOLLOWING, FIRST INDICATE THE KIND OF CHANGE YOU FEEL WHICH HAS OCCURRED SINCE THE INTRODUCTION OF THE FLEXIBLE WORK WEEK SECONDLY, IN THE RIGHT HAND COLUMN INDICATE THE IMPORTANCE OF THIS CHANGE.

DESCRIPTION	HAS IMPROVED		IS SAME AS BEFORE		HAS DETERIORATED		CHANGE WAS OF MAJOR IMPORTANCE		NO CHANGE IN IMPORTANCE		CHANGE WAS OF MINOR IMPORTANCE	
	f	%	f	%	f	%	f	%	f	%	f	%
1. Availability of specific personnel with whom you must communicate	1	20	2	40	2	40	2	40	2	40	1	20
2. Availability of personnel 'for spur of the moment' discussions or phone calls	1	20	1	20	3	60	2	40	1	20	2	40
3. Ability to arrange meetings with specific personnel when necessary			5	100			1	20	4	80		
4. Quality of communication about work assignments	1	20	4	80			1	20	4	80		
5. Quality of service provided by branches	1	20	4	80			1	20	3	60	1	20

Total N = 5

APPENDIX G

Raw Data Utilized to Develop Indices for Changes in Operational Cost for Flextime Branches

Table 132

Raw Data for Comparison of Absenteeism Rates Pre and Post Flextime[a]

Time Period	Maximum Change (Days)		Minimum Change (Days)		Average Change[b] (Days)	
	Total Paid	Single Day or Less	Total Paid	Single Day or Less	Total Paid	Single Day or Less
Before Innovation (One Year)	27 days	7.5 days	94 days	41.5 days	-	-
After Innovation (One Year)	127 days	34.5 days	52.5 days	26.5 days	-	-
Changes in Days Absent	+100 days	+27 days	-41.5 days	-15 days	-	-

a Comparative proportions using pre-innovative year as a base year.

b Based on figures obtained for ten flextime branches.

Table 133

Raw Data for Comparison of Labor Turnover Rates Pre and Post Flextime[a]

Time Period	Maximum Turnover	Minimum Turnover	Average[b] Turnover
Before Innovation (One Year)	33%	121%	-
After Innovation (One Year)	181.8%	63%	-
Changes in Turnover Rates	+148.8%	-58%	-

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained from 11 flextime branches.

Table 134

Raw Data for Comparison of Overtime Rates Pre and Post Flextime[a]

Time Period	Maximum Change Days Overtime	Minimum Change Days Overtime	Average Change[b] Days Overtime
Before Innovation (One Year)	13 days	11 days	-
After Innovation	31 days	- days	-
Change in Overtime Rates	+18 days	-11 days	-

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on information obatined from six flextime branches.

Table 135

Raw Data for Comparison of Average Staff Sizes Pre and Post Flextime[a]

Time Period	Maximum Change Average Staff Size	Minimum Change Average Staff Size	Average Change[b] Average Staff Size
Before Innovation (Year 1, 2)	4 persons	6.5 persons	-
After Innovation (One Year)	10 persons	6 persons	-
Change in Average Staff Size	+6 persons	-.5 persons	-

a Comparative proportions using pre innovative years (two year average) as a base year.

b Based on figures obtained for eleven flextime branches.

APPENDIX H

Raw Data Utilized to Develop Indices for Changes in Operational Costs for Compressed Hours Branch

Table 136

Raw Data for Comparison of Absenteeism Rates Pre and Post Compressed Workweek[a]

Time Period	Total Paid (Days)	Single Day or Less[b]
Before Innovation (June 74 - May 75)	676 days	200 days
After Innovation (June 75 - May 76)	701 days	149 days
Changes in Days Absent	+25 days	-51 days

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained for Finance, Statistics and Legislation Branch.

Table 137

Raw Data for Comparison of Labor Turnover Rates Pre and Post Compressed Workweek[a]

Time Period	Total Turnover[b]
Before Innovation (June 74 - May 75)	71%
After Innovation (June 75 - May 76)	88%
Change in Labor	+17%

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on figures obtained for Finance, Statistics and Legislation Branch.

Table 138

Raw Data for Comparison of Overtime Rates Pre and Post Compressed Workweek[a]

Time Period	Days Overtime
Before Innovation (June 74 - May 75)	3 days
After Innovation (June 75 - May 76)	2 days
Changes in Overtime	-1 day

[a] Comparative proportions using pre-innovative year as a base year.

[b] Based on Figures obtained for Finance, Statistics and Legislation Branch.

Table 139

Raw Data for Comparison of Average Staff Size Pre and Post Compressed Workweek[a]

Time Period	Average Staff Size
Before Innovation (1973-74)	47 persons
Before Innovation (1974-75)	
After Innovation (1975-76)	51 persons
Changes in Staff Size	+4 persons

[a] Comparative proportions using pre-innovative years (two year average) as a base year.

[b] Based on Figures obtained for Finance, Statistics and Legislation Branch.

APPENDIX I

Variable Listing for Job Satisfaction and Organizational Performance Items Used in Correlation Analysis

Table 140

Variable Listing for Job Satisfaction Items Used in Correlation Analysis

Variable Number	Description
1	The over-all program in your branch
2	The way in which the program is organized
3	The method of keeping track of the hours worked each day
4	The freedom you have to decide when you will arrive and depart from work
5	The way your immediate supervisor is administering the program
6	The arrangements you have for travel to and from work
7	Your utilization of the service provided by the bus system
8	Changes which have occurred in the way work is done
9	The way you now organize and complete your work
10	Freedom to handle personal business during the workday

Table 141

Variable Listing for Organizational Performance Items Used in Correlation Analysis

Variable Number	Description
1	Travel to and from work
2	Organization of your work
3	Availability of office equipment
4	Your over-all work performance
5	Availability of people with whom you must work
6	Degree of participation in decisions about work assignments
7	Degree of difficulty in scheduling work requiring others
8	Quality of communication about work assignments
9	Ability to arrange meetings with others when necessary
10	Availability of others for 'spur of the moment' discussions or phone calls
11	Desirability of respondent's branch as a place to work
12	Degree of fatigue associated with your daily work assignments
13	The service your branch provides to other branches
14	The service your branch provides to the public
15	The availability of services such as dining rooms, elevators and cafeterias
16	Management of your family affairs
17	Amount of time spent with family
18	Amount of time spent with friends
19	Time available to organize your personal business affairs